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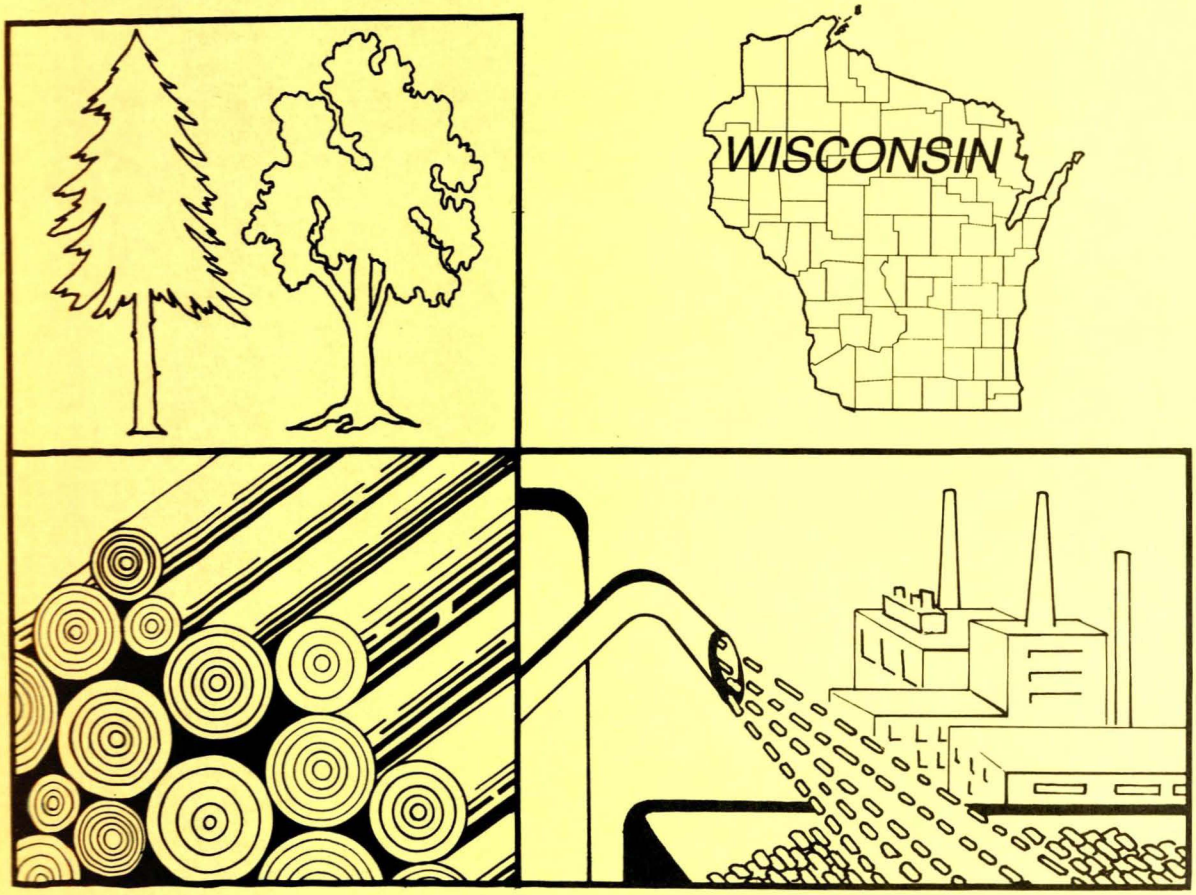
Wisconsin Timber Industry - An Assessment of Timber Product Output and Use, 1992

Ronald L. Hackett and James W. Whipple



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FOREWORD

In this bulletin we discuss recent Wisconsin forest industry trends and report the results of a detailed study of forest industry, industrial roundwood production, and associated primary mill wood and bark residue in Wisconsin in 1992. Such detailed information is necessary for intelligent planning and decisionmaking in wood procurement, forest resource management, and forest industry development. Likewise, researchers need current forest industry and industrial roundwood information for planning projects.

Special thanks are given to the primary wood-using firms that supplied information for this study. Their cooperation is greatly appreciated.

All board foot data in this report have been converted to International 1/4-inch scale by applying a multiplier of 1.08 to all saw-log volume reported in Scribner Decimal C scale by sawmills, a multiplier of 1.04 to all veneer-log volume reported in Scribner Decimal C scale by veneer mills, a multiplier of 1.38 to all saw-log volume reported in Doyle scale by sawmills, and a multiplier of 1.14 to all veneer-log volume reported in Doyle scale by veneer mills.

The last published report from a detailed study of all industrial roundwood output in Wisconsin was in 1990. Most comparisons in this report are with the 1990 study results. **Row and column data of tables may not sum due to rounding, but data in each table cell are accurately displayed.**

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Wisconsin Timber Industry—An Assessment of Timber Product Output and Use, 1992

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HIGHLIGHTS

PRIMARY TIMBER INDUSTRY—INDUSTRIAL ROUNDWOOD

In terms of volume of wood used, pulp mills dominate Wisconsin's forest industry, but sawmills far outnumber any other category. There were 311 mills of all types operating in Wisconsin in 1992. The Forest Survey Units of Wisconsin are shown in figure 1.

- Log and bolt receipts at active primary mills were 369 million cubic feet. Softwood receipts rose 2 percent and hardwood receipts increased 8 percent between 1990 and 1992.
- Industrial roundwood production rose from 343 million cubic feet in 1990 to 357 million cubic feet in 1992. Annual production increases averaged 4 percent for softwoods and more than 1 percent for hardwoods.
- Pulpwood accounted for 66 percent of the industrial roundwood production in 1992.
- In 1992, 84 percent of the total growing-stock removals due to harvest came from aspen, red oak, hard maple, red pine, white birch, jack pine, and soft maple.
- Total material harvested from timberland for industrial roundwood was 499 million cubic feet. Growing-stock removals accounted for 66 percent (328 million cubic feet) of this total.

PULPWOOD

- Wisconsin produced a record high 3.3 million cords of pulpwood (including mill residues) in 1992. This volume was 6 percent higher than the 1990 production of 3.09 million cords, based on the North Central Station's annual study of pulpwood production. Pulpwood includes all fiber-based products made from roundwood, including particleboard, oriented strand board (OSB), waferboard, hardboard, etc.
- Pulpwood remains the leading roundwood product in Wisconsin, accounting for 66 percent of the State's total roundwood timber output. Between 1990 and 1992, roundwood pulpwood production increased 133 thousand cords to nearly 3 million cords.
- Both softwood and hardwood output increased between 1990 and 1992 with softwood output up 5 percent or 41 thousand cords and hardwood output up 4 percent or 91 thousand cords.
- Softwoods accounted for 27 percent of the State's pulpwood production in 1992.
- Aspen made up 38 percent of the roundwood cut for pulpwood in 1992 (fig. 2). Aspen continues to be in high demand and Wisconsin's pulpwood market remains strong, but aspen use is slowly declining in favor of pine, birch, and other hardwood species.

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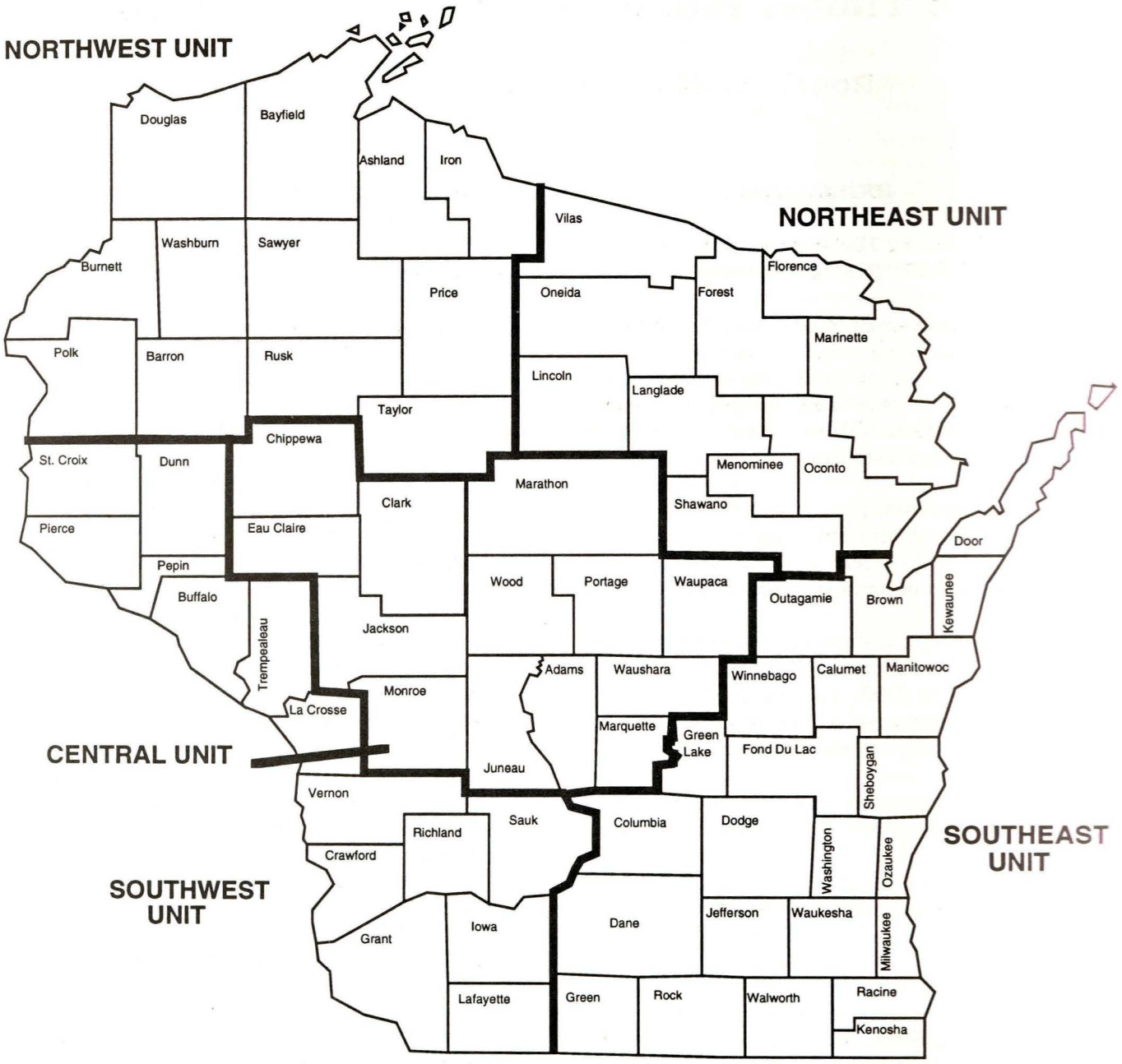

Figure 1.—*Forest Survey Units in Wisconsin.*

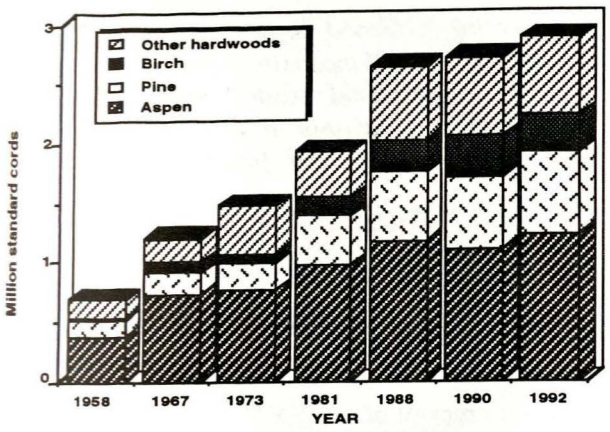

Figure 2.—*Pulpwood production of aspen and all species in Wisconsin for selected years.*

- Pulp mills in Wisconsin obtained 18 percent of their wood needs from out-of-State. Aspen, spruce, and jack pine roundwood were primary imports from the Lake States region. Softwood residues from the Western States were also an important import.

- Ninety percent of the pulpwood roundwood cut in 1992 remained in Wisconsin. Over four-fifths of the exports went to Michigan, and the remainder went to Minnesota. The major species exported were aspen, white birch, hard maple, and soft maple.

- The trend toward increased use of low quality hardwoods should continue as developing technologies allow more applications, i.e., engineered lumber, OSB, composite panels, etc.

SAW LOGS

- Loggers delivered 588 million board feet of Wisconsin saw logs to mills in Wisconsin, Michigan, Minnesota, and other States in 1992, up less than 1 percent (4 million board feet) from 1990.

- Saw logs ranked second behind pulpwood in roundwood production in 1992 (table 3). Saw logs accounted for nearly 30 percent of the State's total roundwood product output.

- In 1992, softwoods accounted for nearly 17 percent of the State's saw-log production, 3 percent more than in 1990. Betweem 1990 and 1992, hardwood saw-log production declined by nearly 2 percent or 11 million board feet to 494 million board feet.

- Major saw-log species harvested in 1992 were red oak, aspen, hard maple, white oak, and red pine. Aspen saw-log production has increased 11 percent since 1990.

- Six percent of the saw-log volume—primarily red oak, red pine, and basswood was shipped to Michigan, Minnesota, and other States outside the region.

- Major production gains since 1990 were in red pine (18 million board feet), aspen (10 million board feet), and jack pine (5 million board feet). Red pine was the only softwood species showing a production gain of more than 10 million board feet. Major declines since 1990 were in red oak and hard maple.

- Leading saw-log producing counties (with more than 20 million board feet each) were Forest, Marinette, Oconto, Bayfield, and Marathon. Twenty-three other counties each cut more than 10 million board feet.

- Wisconsin imported a total of 48 million board feet of saw logs from Michigan, Minnesota, Iowa, and Illinois in 1992. Major imported species were hard maple, aspen, pine, and red oak (fig. 3).

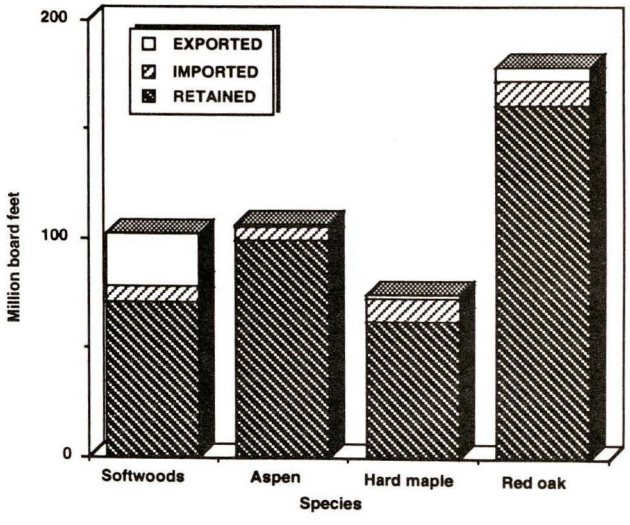

Figure 3.— *Saw-log production exported (mills outside Wisconsin), imported, and retained by select species in Wisconsin, 1992.*

VENEER LOGS

- Loggers delivered 52 million board feet of Wisconsin veneer logs to mills in 1992, 18 percent more than in 1990.

- Hardwood veneer output increased 35 percent to 50 million board feet, while softwood production was down nearly 70 percent to 2.3 million board feet.

- Softwood veneer logs accounted for 4 percent of the State's veneer production, two-thirds less than in 1990. Hardwood veneer logs accounted for 44.2 million board feet or 96 percent of the State's veneer production in 1992, about 13 percent more than in 1990.

- Veneer accounted for less than 3 percent of the State's output of all roundwood timber products in 1992, about the same as in 1990.

- Of the 52 million board feet of veneer logs cut in 1992 in Wisconsin, 65 percent remained in the State, 32 percent was shipped to Michigan, and the remainder was sent to Indiana, or exported to other States and Canada.

- Aspen was the primary veneer species cut in Wisconsin, followed by red oak, hard maple, and white birch. Aspen and pine were the main exports from Wisconsin to other States and Canada.

- Wisconsin imported 15 million board feet of veneer logs and bolts from Michigan, Minnesota, Iowa, Illinois, and Canada. The major species imported were hard maple, red oak, and basswood (fig. 4).

OTHER PRODUCTS

- In 1992, 8.6 million cubic feet of other industrial roundwood products were cut in Wisconsin. These products include commercial posts, industrial fuelwood, shaving bolts, and excelsior bolts, etc.

- Combined output of roundwood used for these products increased by 16 percent in 1992. Industrial fuelwood accounted for more than half of the other industrial roundwood products in 1992 with 4.7 million cubic feet of hardwoods.

Residential fuelwood is a major nonindustrial product in Wisconsin. The results of a residential fuelwood study conducted in 1994 will be available in a separate Station publication in the near future.

TIMBER REMOVALS

- In the production of industrial roundwood in 1992, 328 million cubic feet of growing-stock was removed from timberland.

- Total amount of material harvested for roundwood products (excluding residential fuelwood) was 499 million cubic feet. Only 28 percent of this total was left in the woods as logging residues (fig. 5).

- Major species harvested in both growing stock and sawtimber were aspen, red oak, hard maple, and red pine.

LOGGING RESIDUE

- During 1992, loggers in Wisconsin generated an estimated 142 million cubic feet of logging residue. Logging residue consists of all unmerchantable wood fiber not utilized during logging operations on timberland (this does not include nontimberland removals).

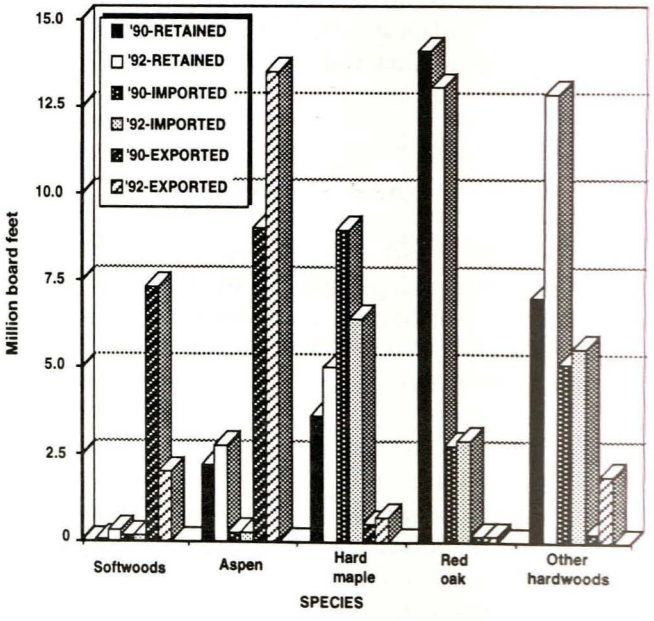

Figure 4.—*Veneer production exported (mills outside Wisconsin), imported, and retained by select species in Wisconsin, 1990-1992.*

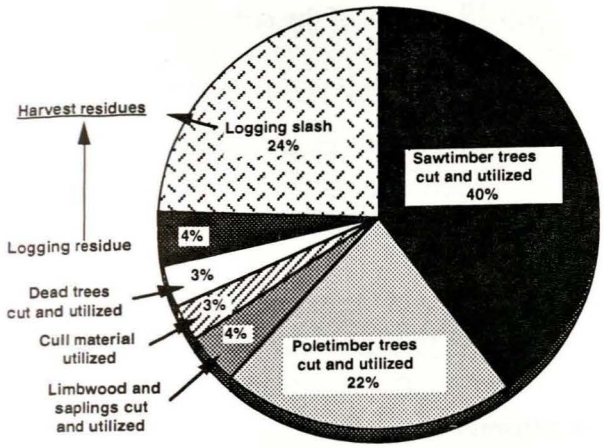

Figure 5.— *Distribution of material harvested for industrial roundwood in Wisconsin, 1992.*

- Aspen, white birch, hard maple, and red oak accounted for 66 percent of all logging residues.

- Eight counties—Forest, Langlade, Marinette, Oneida, Vilas, Bayfield, Price, and Sawyer—each produced more than 5 million cubic feet of logging residue. All the Survey Units except the Southeast had counties with more than a million cubic feet of residues.

PRIMARY MILL RESIDUE

- Ninety-eight percent or more of each residue class (coarse, fine, bark) generated at Wisconsin primary mills was used.

- During 1992, Wisconsin primary wood-using mills (except the pulp, particleboard, and waferboard mills) generated 887 thousand green tons of coarse residue, 455 thousand green tons of fine residue, and 1,247 thousand green tons of bark.

- Pulpwood mills consumed 48 percent of the coarse residue for fiber products, and industry and households consumed 38 percent for fuel.

- Fine residue and bark were used primarily for industrial fuel, soil conditioner, mulch, livestock bedding, and poultry litter.

REGIONAL TRENDS

- Output of industrial roundwood products for the State as a whole increased 4 percent or 14 million cubic feet between 1990 and 1992. The largest increase of 10 percent was in the Northwest Unit with 128 million cubic feet in 1992 (fig . 1).

- The Northwest and Northeast Units had increases and the Central and Southeast Units remained at the same level between 1990 and 1992. The Southwest Unit showed the only decline—a drop of 12 and 7 percent, respectively, in hardwood and softwood output.

Northeast Unit

- In 1992, 128 million cubic feet of roundwood was produced in the 10 counties that make up the Northeast Unit of Wisconsin and accounted for 36 percent of the State's total output.

- The 128 million cubic feet of industrial roundwood reflects an increase of 4 percent between 1990 and 1992. Softwood output was down 18 percent in the Unit and accounted for 6 percent of the total output in 1992.

- Saw-log production of more than 32 million cubic feet accounted for 25 percent of the total roundwood production in this Unit.

- Production of pulpwood increased almost 5 percent and accounted for almost 70 percent of the Unit's total roundwood output.

- The Northeast Unit produced 31 percent of the State's saw logs, 35 percent of the veneer logs, 37 percent of the pulpwood, 80 percent of the industrial fuelwood, and 26 percent of the roundwood used for other industrial products.

- In 1992, the Northeast Unit had 82 sawmills, 3 pulpmills, 4 veneer mills, and 10 other miscellaneous mills.

- Nearly 9 percent of the sawmills in this region had receipts greater than 10 million board feet, while a third of the mills had less than 5 million board feet of receipts.

Northwest Unit

- Between 1990 and 1992, roundwood production from the 12 counties that make up the

Northwest Unit increased nearly 2 percent to 125 million cubic feet.

- This Unit accounted for 35 percent of the State's total roundwood output in 1992, down by 1 percent from 1990.
- Saw-log production of 25 million cubic feet accounted for 20 percent of the total roundwood production in this Unit.
- Pulpwood production increased by almost 7 percent between 1990 and 1992, and accounted for more than 75 percent of the Unit's total roundwood output in 1992.
- The Northwest Unit produced 23 percent of the State's saw logs, 41 percent of the veneer logs, 40 percent of the pulpwood, 12 percent of the industrial fuelwood, and 41 percent of the roundwood used for other industrial products.
- In 1992, 83 mills, including 67 sawmills, 5 veneer mills, 3 pulpmills, 1 waferboard mill, and 7 miscellaneous mills operated in the Northwest Unit.
- Only one mill in the Northwest Unit had receipts of more than 10 million board feet, while more than 90 percent of the mills had receipts less than 5 million board feet.

Central Unit

- The 13-county Central Unit produced the third largest amount of roundwood in the State. In 1992, this Unit produced almost 67 million cubic feet of industrial roundwood, about 2 percent more than in 1990. Total production of industrial roundwood was nearly 19 percent of the State's total industrial roundwood output.
- Saw-log production of 20 million cubic feet accounted for 30 percent of the total roundwood produced in this Unit in 1992.
- Pulpwood production declined by about 4 percent between 1990 and 1992, and accounted for 67 percent of the Unit's total roundwood output in 1992.
- The Central Unit produced 19 percent of the State's saw logs, 10 percent of the veneer logs, 19 percent of the pulpwood, 1 percent of the industrial fuelwood, and 14 percent of the other industrial roundwood produced.
- In 1992, 95 mills including 80 sawmills, 3 veneer mills, 8 pulpmills, 1 particleboard mill and 3 miscellaneous mills operated in the Central Unit.
- Six percent of the sawmills in the Central Unit had receipts of 5 million board feet or more.

Southwest Unit

- The 14 counties that make up the Southwest Unit produced nearly 29 million cubic feet of industrial roundwood, about 5 percent less than in 1990. Total production of industrial roundwood was 8 percent of the State's total industrial roundwood output.
- Saw-log production declined by almost 16 percent to 21 million cubic feet in 1992, but it still accounted for 72 percent of the Unit's total industrial roundwood volume.
- Pulpwood production increased by 52 percent from 1990 to more than 6 million cubic feet of roundwood output in 1992. Pulpwood production accounted for 22 percent of the Unit's total roundwood output.
- The Southwest Unit produced 20 percent of the State's saw logs, more than 10 percent of the veneer logs, nearly 3 percent of the pulpwood, and 17 percent of the other industrial products.
- In 1992, 75 mills, including 72 sawmills and 3 miscellaneous mills operated in the Southwest Unit.
- Nearly 3 percent of the sawmills in this Unit had receipts greater than 10 million board feet; more than three-quarters of the mills had receipts less than 5 million board feet.

Southeast Unit

- In 1992, nearly 8 million cubic feet of roundwood was produced in the 23 counties that make up the Southeast Unit of Wisconsin, and accounted for 2 percent of the State's total output. This reflects a decline of nearly 6 percent between 1990 and 1992.

- The production of saw logs was 5 million cubic feet, accounting for 64 percent of the Unit's total roundwood output.
- Pulpwood production rose 66 percent between 1990 and 1992, and accounted for more than 25 percent of the Unit's roundwood output in 1992.
- The Southeast Unit produced 5 percent of the State's saw logs, more than 3 percent of the veneer logs, less than 1 percent of the pulpwood, and more than 2 percent of the other industrial roundwood produced.
- In 1992, the Southeast Unit had 56 sawmills, 2 veneer mills, 4 pulp mills, and 2 miscellaneous mills.
- Only one sawmill in the Southeast Unit had receipts greater than 10 million board feet, 4 percent had receipts between 5 and 10 million board feet, while 9 percent had receipts between 1 million and 5 million board feet.

APPENDIX

STUDY METHODS

This study was a cooperative effort of the Wisconsin Department of Natural Resources (WDNR) and the North Central Forest Experiment Station (NCFES). Using mail questionnaires supplied by NCFES and designed to determine the size and composition of the State's primary wood-using industry, its use of roundwood, and its generation and disposition of wood residues, the WDNR canvassed all primary wood-using mills within the State. Followups to nonresponding mills were made by WDNR, using additional mailings, telephone, and personal contacts until a 100-percent response was achieved. Completed questionnaires were sent to NCFES for editing and processing.

As part of data editing and processing, all industrial roundwood volumes reported on the questionnaires were converted to standard units of measure using regional conversion factors. Timber removals by source of material and harvest residues generated during logging were estimated from standard product volumes using factors developed from logging utilization studies previously conducted by NCFES. Finalized data on Wisconsin's industrial roundwood receipts were loaded into a regional timber removals data base where they were supplemented with data on out-of-State uses of Wisconsin roundwood to provide a complete assessment of Wisconsin's timber product output.

DEFINITION OF TERMS

Board foot.—Unit of measure applied to roundwood. It relates to lumber that is 1 foot long, 1 foot wide, and 1 inch thick (or its equivalent).

Central stem.—The portion of a tree between a 1-foot stump and the minimum 4.0-inch top diameter outside bark, or point where the central stem breaks into limbs.

Coarse mill residue.—Wood residue suitable for chipping such as slabs, edgings, and veneer cores.

Commercial species.—Tree species presently or prospectively suitable for industrial wood products. (Note: Excludes species of typically small size, poor form, or inferior quality such as hophornbeam, osage-orange, and redbud.)

Cull removals.—Net volume of rough and rotten trees plus the net volume in sections of the central stem of growing-stock trees that do not meet regional merchantability standards, harvested for industrial roundwood products.

Dead removals.—Net volume of dead trees harvested for industrial roundwood products.

Diameter at breast height (d.b.h.).—The outside bark diameter at 4.5 feet above the forest floor on the uphill side of the tree. For determining breast height, the forest floor includes the duff layer that may be present, but does not include unincorporated woody debris that may rise above the ground line.

Fine mill residue.—Wood residue not suitable for chipping such as sawdust and veneer clippings.

Forest land.—Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use. (Note: Stocking is measured by comparing specified standards with basal area and/or number of trees, age or size, and spacing.) The minimum area for classification of forest land is 1 acre. Roadside, streamside, and shelterbelt strips of timber must have a crown width of at least 120 feet to qualify as forest land. Unimproved roads and trails, streams, or other bodies of water or clearings in forest areas shall be classed as forest if less than 120 feet wide.

Growing-stock removals.—The growing-stock volume removed from the timberland inventory by harvesting industrial roundwood products. (Note: Includes sawtimber removals, poletimber removals, and logging residues.)

Growing-stock tree.—A live timberland tree of commercial species that meets specified standards of size, quality, and merchantability. (Note: Excludes rough, rotten, and dead trees.)

Growing-stock volume.—Net volume of growing-stock trees 5.0 inches d.b.h. and over, from 1 foot above the ground to a minimum 4.0 inch top diameter outside bark of the central stem or to the point where the central stem breaks into limbs.

Hardwoods.—Dicotyledonous trees, usually broad-leaved and deciduous.

Harvest residues.—The total net volume of unused portions of trees cut or killed by logging. (Note: Includes both logging residues and logging slash.)

Industrial fuelwood.—A roundwood product, with or without bark, used to generate energy at non-manufacturing facilities such as schools, correctional institutions, or electric generating plants.

Industrial roundwood products.—Saw logs, pulpwood, veneer logs, poles, commercial posts, piling, cooperage logs, particleboard bolts, shaving bolts, lath bolts, charcoal bolts, and chips from roundwood used for pulp or board products.

Industrial roundwood production.—The quantity of industrial roundwood harvested in a geographic area.

Industrial roundwood receipts.—The quantity of industrial roundwood received by commercial mills in a geographic area.

International 1/4-inch rule.—A log rule or formula for estimating the board foot volume of logs, allowing one half-inch of taper for each 4-foot length. The rule appears in a number of forms that allow for kerf. In this form, one quarter-inch of kerf is assumed. This rule is used as the USDA Forest Service standard log rule in the Eastern United States.

Limbwood removals.—Net volume of all portions of a tree other than the central stem, (including forks, large limbs, tops, and stumps) harvested for industrial roundwood products.

Logging residue.—The net volume of unused portions of the merchantable central stem of growing-stock trees cut or killed by logging.

Logging slash.—The net volume of unused portions of the unmerchantable (non-growing-stock) sections of trees cut or killed by logging.

Merchantable sections.—Refers to sections of the central stem of growing-stock trees that meet either pulpwood or saw-log specifications.

Net volume.—Gross volume less deductions for rot, sweep, or other defects affecting use for roundwood products.

Noncommercial species.—Tree species of typically small size, poor form, or inferior quality that normally do not develop into trees suitable for industrial roundwood products. Classified in volume tables as rough trees.

Nonforest land.—Land that has never supported forests, and land formerly forested where use for timber management is precluded by development for other uses. (Note: Includes areas used for crops, improved pasture, residential areas, city parks, improved roads of any width and adjoining clearings, powerline clearings of any width, and 1- to 39.9-acre areas of water classified by the Bureau of the Census as land. If intermingled in forest areas, improved roads and nonforest strips must be more than 120 feet wide and more than 1 acre to qualify as nonforest land.)

Nonforest land removals.—Net volume of trees on nonforest lands harvested for industrial roundwood products.

Poletimber.—A growing-stock tree at least 5.0 inches d.b.h. but smaller than sawtimber size (9.0 inches d.b.h. for softwoods, 11.0 inches d.b.h. for hardwoods).

Poletimber removals.—Net volume in the merchantable central stem of poletimber trees harvested for industrial roundwood products.

Primary wood-using mills.—Mills receiving roundwood or chips from roundwood for processing into products such as lumber, veneer, and pulp.

Primary wood-using mill residue.—Wood materials (coarse and fine) and bark generated at manufacturing plants from roundwood processed into principal products. These residues include wood products (byproducts) obtained incidental to production of principal products and wood materials not utilized for some product.

Rotten tree.—A tree that does not meet regional merchantability standards because of excessive unsound cull.

Rough tree.—A tree that does not meet regional merchantability standards because of excessive sound cull. Includes noncommercial tree species.

Roundwood.—Logs, bolts, or other round sections cut from trees (including chips from roundwood).

Sapling.—A live tree between 1.0 and 5.0 inches d.b.h.

Sapling removals.—Net volume in saplings harvested for industrial roundwood products.

Saw-log portion.—That portion of the central stem of sawtimber trees between the stump and the saw-log top.

Saw-log top.—The point on the central stem of sawtimber trees above which a saw log cannot be produced. The minimum saw-log top is 7.0 inches d.o.b. for softwoods and 9.0 inches d.o.b. for hardwoods.

Sawtimber removals.—As used in table 4, sawtimber removals (used for products) refers to the net volume in the merchantable central stem of sawtimber trees harvested for industrial roundwood products. (Note: Includes the saw-log and upper-stem portions of sawtimber trees.) When referring to the sawtimber volume removed from the timberland inventory as in table 21, sawtimber removals refers to the net volume in the saw-log portion of sawtimber trees harvested for roundwood products or left on the ground as harvest residue, and is usually expressed in thousands of board feet (International 1/4-inch rule).

Sawtimber tree.—A growing-stock tree containing at least a 12-foot saw log or two noncontiguous saw logs 8 feet or longer, and meeting regional specifications for freedom from defect. Softwoods must be at least 9.0 inches d.b.h. and hardwoods must be at least 11.0 inches d.b.h.

Sawtimber volume.—Net volume in the saw-log portion of sawtimber trees.

Softwoods.—Coniferous trees, usually evergreen, having needles or scale-like leaves.

Timber product output.—The volume of roundwood products produced from an area's forests.

Timberland.—Forest land that is producing, or is capable of producing, in excess of 20 cubic feet per acre per year of industrial roundwood products under natural conditions, is not withdrawn from timber utilization by statute or administrative regulation, and is not associated with urban or rural development.

Tree.—A woody plant usually having one or more perennial stems, a more or less definitely formed crown of foliage, and a height of at least 12 feet at maturity.

Upper stem portion.—That portion of the central stem of sawtimber trees between the saw-log top and the minimum top diameter of 4.0 inches outside bark, or the point where the central stem breaks into limbs.

Veneer log.—A log used in the production of plywood, finished panels, containers, or veneer sheets, both rotary cut and sliced.

COMMON AND SCIENTIFIC NAMES OF TREE SPECIES MENTIONED IN THIS REPORT

SOFTWOODS

Jack pine ..... *Pinus banksiana*
Red pine ..... *Pinus resinosa*
Eastern white pine ..... *Pinus strobus*
Spruce
  White spruce ..... *Picea glauca*
  Black spruce ..... *Picea mariana*
Balsam fir ..... *Abies balsamea*
Eastern hemlock ..... *Tsuga canadensis*
Tamarack ..... *Larix laricina*
Northern white-cedar ..... *Thuja occidentalis*
Eastern redcedar ..... *Juniperis virginiana*

HARDWOODS

White oak
  White oak ..... *Quercus alba*
  Bur oak ..... *Quercus macrocarpa*
  Chinkapin oak ..... *Quercus muehlenbergii*
  Swamp white oak ..... *Quercus bicolor*
Red oak
  Northern red oak ..... *Quercus rubra*
  Black oak ..... *Quercus velutina*
  Northern pin oak ..... *Quercus ellipsoidalis*
Hickory
  Bitternut hickory ..... *Carya cordiformis*
  Pignut hickory ..... *Carya glabra*
  Shagbark hickory ..... *Carya ovata*
White birch ..... *Betula papyrifera*
Yellow birch ..... *Betula alleghaniensis*
Hard maple
  Black maple ..... *Acer nigrum*
  Sugar maple ..... *Acer saccharum*
Soft maple
  Red maple ..... *Acer rubrum*
  Silver maple ..... *Acer saccharinum*
American beech ..... *Fagus grandifolia*
Ash
  Black ash ..... *Fraxinus nigra*
  White ash ..... *Fraxinus americana*
  Green ash ..... *Fraxinus pennsylvanica*
Balsam poplar ..... *Populus balsamifera*
Aspen
  Bigtooth aspen ..... *Populus grandidentata*
  Quaking aspen ..... *Populus tremuloides*
Eastern cottonwood ..... *Populus deltoides*
American basswood ..... *Tilia americana*
Black walnut ..... *Juglans nigra*
Elm
  American elm ..... *Ulmus americana*
  Rock elm ..... *Ulmus thomasii*
  Slippery elm ..... *Ulmus rubra*
Other hardwoods
  Northern catalpa ..... *Catalpa speciosa*
  Black cherry ..... *Prunus serotina*
  River birch ..... *Betula nigra*
  Black locust ..... *Robinia pseudoacacia*
  Honeylocust ..... *Gleditsia triacanthos*
  Red mulberry ..... *Morus rubra*
  Butternut ..... *Juglans cineria*
  Black willow ..... *Salix nigra*
  Boxelder ..... *Acer negundo*
  Hackberry ..... *Celtis occidentalis*

TABLE TITLES

Table 1.—Number of active primary wood-using mills in Wisconsin, 1981, 1986, 1988, 1990, and 1992

Table 2.—Industrial roundwood receipts by type of mill in Wisconsin, 1981, 1986, 1988, 1990, and 1992

Table 3.—Industrial roundwood production by Forest Survey Unit, species group, and type of product, Wisconsin, 1992

Table 4.—Material harvested on timberland for industrial roundwood by source of material and species group, Wisconsin, 1992

Table 5.—Wisconsin pulpwood production by species group, 1946-1992

Table 6.—Wisconsin pulpwood production by species group and destination, 1992

Table 7.—Pulpwood production from roundwood by Forest Survey Unit, county, and species group, Wisconsin, 1992

Table 8.—Pulpwood receipts in Wisconsin by species group, 1946-1992

Table 9.—Pulpwood receipts in Wisconsin by area of origin, 1960-1992

Table 10.—Pulpwood receipts in Wisconsin by species group and area of origin, 1992

Table 11.—Saw-log production and receipts in Wisconsin by species group, 1990 and 1992

Table 12.—Saw-log production by Forest Survey Unit, species group, and State of destination, Wisconsin, 1992

Table 13.—Saw-log production by Forest Survey Unit, county, and species group, Wisconsin, 1992

Table 14.—Saw-log receipts in Wisconsin by Forest Survey Unit, species group, and State of origin, 1992

Table 15.—Veneer-log production and receipts in Wisconsin for selected years, 1946-1992

Table 16.—Veneer-log production and receipts by species group in Wisconsin, 1990 and 1992

Table 17.—Veneer-log and bolt production by species group and State or country of destination, Wisconsin, 1992

Table 18.—Veneer-log and bolt receipts in Wisconsin by area of origin for selected years, 1946-1992

Table 19.—Veneer-log and bolt receipts in Wisconsin by species group and State of origin, 1992

Table 20.— Growing-stock removals from timberland for industrial roundwood by Forest Survey Unit, county, and species group, Wisconsin, 1992

Table 21.— Sawtimber removals from timberland for industrial roundwood production by Forest Survey Unit, county, and species group, Wisconsin, 1992

Table 22.— Harvest residue generated by industrial roundwood harvesting by Forest Survey Unit, county, and species group, Wisconsin, 1992

Table 23.—Residue produced at primary wood-using mills by type of material, type of use, and Forest Survey Unit, Wisconsin, 1992

Table 1.--Number of active primary wood-using mills in Wisconsin, 1981, 1986, 1988, 1990, 1992

Kind of mill	1981	1986	1988	1990	1992
Sawmills 1/					
Large 2/	23	21	32	27	33
Medium 3/	110	103	92	102	106
Small 4/	140	142	131	139	114
Total	273	266	255	268	253
Pulp mills 5/	23	21	22	22	21
Veneer mills	15	15	17	17	12
Other mills	12	15	15	16	25
Total	323	317	309	323	311

1/ Mills persistently sawing 50 mbf or more annually.

2/ Annual lumber production in excess of 5 million board feet.

3/ Annual lumber production from 1 million to 5 million board feet.

4/ Annual lumber production from 50 thousand to 1 million board feet.

5/ Includes particleboard plants, i.e., OSB, waferboard, etc.

Table 2.--Industrial roundwood receipts by type of mill in Wisconsin, 1981, 1986, 1988, 1990, 1992

(in million cubic feet)

Kind of mill	1981	1986	1988	1990	1992
ALL SPECIES					
Pulp mills 1/	208.7	224.0	226.1	235.7	248.1
Sawmills	94.4	93.2	93.4	97.8	105.7
Other mills 2/	6.6	9.7	9.2	14.0	15.4
Total	309.7	326.9	328.7	347.5	369.2
SOFTWOODS					
Pulp mills	62.7	55.9	67.2	72.9	76.5
Sawmills	15.8	11.3	13.2	13.8	13.8
Other mills	0.2	0.4	0.1	2.3	0.5
Total	78.7	67.6	80.5	89.0	90.8
HARDWOODS					
Pulp mills	146.0	168.1	158.9	162.8	171.6
Sawmills	78.6	81.9	80.2	84.0	91.9
Other mills	6.4	9.3	9.1	11.7	14.8
Total	231.0	259.3	248.2	258.5	278.3

1/ Includes particleboard plants i.e., OSB, waferboard, etc.

2/ Does not include treating plants or fuelwood receipts.

Table 3.--Industrial roundwood production by Forest Survey Unit, species group, and type of product, Wisconsin, 1992

ALL UNITS

Species group	Saw logs		Veneer logs		Pulpwood		Industrial fuelwood		Poles		Posts		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Pieces*	*MCF 3/*	*M pieces*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS														
N. white-cedar	1,137	239	8	1	216	17	--	--	432	2	109	112	33	404
Redcedar	23	5	--	--	--	--	--	--	--	--	--	--	--	5
Balsam fir	144	30	--	--	61,217	4,824	--	--	--	--	--	--	--	4,854
Hemlock	3,595	612	341	56	28,992	2,290	--	--	--	--	--	--	--	2,958
Jack pine	11,166	2,344	88	14	337,501	26,629	--	--	--	--	--	--	1	28,988
Red pine	51,890	8,832	546	89	305,747	24,154	--	--	1,400	8	191	196	335	33,615
White pine	26,448	4,501	982	160	42,204	3,334	--	--	--	--	--	--	158	8,153
Spruce	444	93	323	53	40,524	3,193	--	--	--	--	--	--	--	3,339
Tamarack	26	5	28	5	4,706	371	--	--	--	--	--	--	--	381
Total	94,873	16,661	2,317	377	821,106	64,812	--	--	1,832	11	300	308	527	82,696
HARDWOODS														
Ash	13,851	2,472	356	58	70,948	5,605	57	4	--	--	--	--	--	8,139
Aspen	99,891	17,441	16,259	2,647	1,216,016	96,065	50,589	3,541	--	--	--	--	2,726	122,420
Balsam poplar	78	14	7	1	6,257	494	--	--	--	--	--	--	--	509
Basswood	34,729	6,199	3,282	534	50,854	4,017	--	--	--	--	--	--	203	10,954
Beech	2,306	412	464	76	4,448	351	--	--	--	--	--	--	--	838
White birch	22,916	4,090	5,198	846	290,140	22,950	50	4	--	--	--	--	72	27,962
Yellow birch	3,952	705	713	116	16,916	1,336	--	--	--	--	--	--	--	2,158
Cottonwood	1,259	225	364	59	1,172	93	--	--	--	--	--	--	--	377
Elm	3,883	693	--	--	24,829	1,961	--	--	--	--	--	--	--	2,655
Hickory	154	27	--	--	--	--	--	--	--	--	--	--	--	27
Hard maple	63,170	10,556	5,719	931	226,242	17,873	104	7	--	--	--	--	--	29,367
Soft maple	30,421	5,430	755	123	172,900	13,676	163	11	--	--	--	--	29	19,270
Red oak	166,953	29,233	13,160	2,142	70,537	5,579	15,398	1,078	--	--	--	--	13	38,046
White oak	43,526	7,621	3,304	538	13,675	1,082	241	17	--	--	1	1	57	9,316
Walnut	1,234	220	246	40	--	--	--	--	--	--	--	--	--	260
Black cherry	1,788	319	67	11	12,464	985	--	--	--	--	--	--	--	1,315
Willow	1	--	--	--	--	--	--	--	--	--	--	--	0	0
Hackberry	2,204	393	--	--	79	6	--	--	--	--	--	--	--	400
Butternut	373	67	--	--	--	--	--	--	--	--	--	--	--	67
Other hardwoods	920	164	--	--	--	--	--	--	--	--	--	--	0	164
Total	493,606	86,283	49,893	8,123	2,177,478	172,075	66,601	4,662	--	--	1	1	3,101	274,244
All species	588,479	102,944	52,210	8,500	2,998,584	236,887	66,601	4,662	1,832	11	301	309	3,628	356,940

(Table 3 continued on next page)

(Table 3 continued)

CENTRAL UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Industrial fuelwood		Poles		Posts		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Pieces*	*MCF 3/*	*M pieces*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS														
N. white-cedar	39	8	--	--	--	--	--	--	--	--	--	--	--	9
Balsam fir	--	--	--	--	364	29	--	--	--	--	--	--	--	29
Hemlock	144	24	--	--	2,008	159	--	--	--	--	--	--	--	183
Jack pine	354	74	--	--	128,955	10,175	--	--	--	--	--	--	--	10,249
Red pine	4,214	717	26	4	128,988	10,190	--	--	--	--	46	48	143	11,102
White pine	7,143	1,216	33	5	18,022	1,424	--	--	--	--	--	--	122	2,767
Spruce	--	--	--	--	1,618	127	--	--	--	--	--	--	--	127
Tamarack	--	--	--	--	167	13	--	--	--	--	--	--	--	13
Total	11,894	2,040	60	10	280,122	22,116	--	--	--	--	46	48	265	24,478
HARDWOODS														
Ash	3,496	624	14	2	10,617	839	57	4	--	--	--	--	--	1,469
Aspen	14,583	2,546	245	40	175,246	13,844	--	--	--	--	--	--	214	16,645
Balsam poplar	--	--	1	--	97	8	--	--	--	--	--	--	--	8
Basswood	6,069	1,083	139	23	5,039	398	--	--	--	--	--	--	--	1,504
Beech	80	14	--	--	101	8	--	--	--	--	--	--	--	22
White birch	838	150	--	--	23,015	1,820	--	--	--	--	--	--	2	1,972
Yellow birch	553	99	20	3	2,233	176	--	--	--	--	--	--	--	278
Cottonwood	67	12	10	2	97	8	--	--	--	--	--	--	--	21
Elm	379	68	--	--	4,442	351	--	--	--	--	--	--	--	419
Hard maple	10,642	1,778	1,156	188	26,835	2,120	104	7	--	--	--	--	--	4,094
Soft maple	8,076	1,442	224	36	27,766	2,196	153	11	--	--	--	--	4	3,689
Red oak	46,557	8,152	3,463	564	13,660	1,080	562	39	--	--	--	--	--	9,836
White oak	10,912	1,911	67	11	2,648	209	91	6	--	--	--	--	--	2,137
Walnut	4	1	32	5	--	--	--	--	--	--	--	--	--	6
Black cherry	165	29	10	2	1,661	131	--	--	--	--	--	--	--	162
Hackberry	340	61	--	--	79	6	--	--	--	--	--	--	--	67
Butternut	117	21	--	--	--	--	--	--	--	--	--	--	--	21
Total	102,878	17,990	5,381	876	293,534	23,196	967	68	--	--	--	--	220	42,350
All species	114,772	20,030	5,440	886	573,656	45,312	967	68	--	--	46	48	485	66,828

(Table 3 continued on next page)

(Table 3 continued)

NORTHEAST UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Industrial fuelwood		Poles		Posts		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Pieces*	*MCF 3/*	*M pieces*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS														
N. white-cedar	573	120	8	1	14	1	--	--	432	2	109	112	29	266
Balsam fir	92	19	--	--	28,832	2,272	--	--	--	--	--	--	--	2,291
Hemlock	3,261	555	96	16	21,527	1,701	--	--	--	--	--	--	--	2,271
Jack pine	1,817	381	42	7	58,200	4,592	--	--	--	--	--	--	--	4,980
Red pine	19,847	3,378	267	44	70,342	5,557	--	--	--	--	--	--	158	9,137
White pine	9,658	1,644	423	69	13,441	1,062	--	--	--	--	--	--	34	2,808
Spruce	209	44	39	6	17,973	1,416	--	--	--	--	--	--	--	1,466
Tamarack	11	2	--	--	2,219	175	--	--	--	--	--	--	--	177
Total	35,468	6,144	875	142	212,550	16,776	--	--	432	2	109	112	221	23,397
HARDWOODS														
Ash	3,985	711	60	10	27,863	2,201	--	--	--	--	--	--	--	2,922
Aspen	51,835	9,050	2,795	455	451,914	35,701	42,857	3,000	--	--	--	--	486	48,692
Balsam poplar	60	11	6	1	5,305	419	--	--	--	--	--	--	--	431
Basswood	9,223	1,646	1,301	212	26,121	2,064	--	--	--	--	--	--	202	4,123
Beech	1,676	299	338	55	3,661	289	--	--	--	--	--	--	--	643
White birch	13,917	2,484	4,593	748	138,710	10,972	--	--	--	--	--	--	--	14,204
Yellow birch	2,415	431	610	99	7,654	605	--	--	--	--	--	--	--	1,135
Cottonwood	34	6	--	--	668	53	--	--	--	--	--	--	--	59
Elm	215	38	--	--	10,767	851	--	--	--	--	--	--	--	889
Hard maple	31,130	5,202	3,545	577	115,345	9,112	--	--	--	--	--	--	--	14,891
Soft maple	10,574	1,887	338	55	76,100	6,019	--	--	--	--	--	--	--	7,962
Red oak	19,693	3,448	3,077	501	29,363	2,323	14,286	1,000	--	--	--	--	--	7,272
White oak	3,053	534	331	54	5,029	398	--	--	--	--	--	--	--	986
Walnut	--	--	43	7	--	--	--	--	--	--	--	--	--	7
Butternut	90	16	--	--	--	--	--	--	--	--	--	--	--	16
Black cherry	442	79	10	2	6,065	479	--	--	--	--	--	--	--	560
Willow	1	--	--	--	--	--	--	--	--	--	--	--	--	--
Hackberry	204	36	--	--	--	--	--	--	--	--	--	--	--	36
Total	148,546	25,881	17,047	2,775	904,565	71,485	57,143	4,000	--	--	--	--	687	104,829
All species	184,014	32,025	17,922	2,918	1,117,115	88,261	57,143	4,000	432	2	109	112	908	128,226

(Table 3 continued on next page)

(Table 3 continued)

NORTHWEST UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Industrial fuelwood		Poles		Posts		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Pieces*	*MCF 3/*	*M pieces*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS														
N. white-cedar	25	5	--	--	202	16	--	--	--	--	--	--	2	23
Balsam fir	52	11	--	--	31,924	2,516	--	--	--	--	--	--	--	2,527
Hemlock	48	8	245	40	5,441	430	--	--	--	--	--	--	--	478
Jack pine	8,971	1,883	46	7	142,850	11,271	--	--	--	--	--	--	1	13,162
Red pine	26,120	4,446	253	41	56,456	4,460	--	--	1,400	8	41	42	15	9,012
White pine	7,374	1,255	523	85	4,418	349	--	--	--	--	--	--	--	1,689
Spruce	223	47	284	46	19,695	1,552	--	--	--	--	--	--	--	1,645
Tamarack	4	1	28	5	2,301	181	--	--	--	--	--	--	--	187
Total	42,818	7,656	1,379	225	263,286	20,775	--	--	1,400	8	41	42	18	28,723
HARDWOODS														
Ash	2,481	443	271	44	31,795	2,512	--	--	--	--	--	--	--	2,999
Aspen	28,723	5,015	13,065	2,127	554,448	43,801	7,732	541	--	--	--	--	1,555	53,040
Balsam poplar	--	--	--	--	443	35	--	--	--	--	--	--	--	35
Basswood	11,209	2,001	1,661	270	19,471	1,538	--	--	--	--	--	--	1	3,810
Beech	4	1	--	--	686	54	--	--	--	--	--	--	--	55
White birch	7,750	1,383	597	97	127,022	10,047	50	4	--	--	--	--	--	11,531
Yellow birch	910	162	68	11	6,890	544	--	--	--	--	--	--	--	718
Cottonwood	3	1	--	--	405	32	--	--	--	--	--	--	--	33
Elm	80	14	--	--	9,575	756	--	--	--	--	--	--	--	771
Hard maple	9,907	1,655	624	102	82,103	6,486	--	--	--	--	--	--	--	8,243
Soft maple	5,065	904	52	8	67,580	5,345	10	1	--	--	--	--	--	6,258
Red oak	27,505	4,816	3,572	582	26,752	2,116	550	39	--	--	--	--	7	7,559
White oak	2,973	520	284	46	5,853	463	150	11	--	--	--	--	--	1,040
Walnut	1	--	--	--	--	--	--	--	--	--	--	--	--	--
Black cherry	44	8	35	6	4,615	365	--	--	--	--	--	--	--	378
Hackberry	112	20	--	--	--	--	--	--	--	--	--	--	--	20
Butternut	78	14	--	--	--	--	--	--	--	--	--	--	--	14
Total	96,847	16,959	20,230	3,293	937,639	74,096	8,492	594	--	--	--	--	1,562	96,505
All species	139,665	24,614	21,609	3,518	1,200,925	94,870	8,492	594	1,400	8	41	42	1,580	125,227

(Table 3 contined on next page)

(Table 3 continued)

SOUTHEAST UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Industrial fuelwood		Poles		Posts		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Pieces*	*MCF 3/*	*M pieces*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS														
N. white-cedar	499	105	--	--	--	--	--	--	--	--	--	--	1	106
Balsam fir	--	--	--	--	20	2	--	--	--	--	--	--	--	2
Hemlock	143	24	--	--	9	1	--	--	--	--	--	--	--	25
Jack pine	24	5	--	--	1,110	88	--	--	--	--	--	--	--	93
Red pine	84	14	--	--	13,082	1,033	--	--	--	--	--	--	17	1,065
White pine	829	141	--	--	2,288	181	--	--	--	--	--	--	--	322
Spruce	12	2	--	--	545	43	--	--	--	--	--	--	--	45
Tamarack	11	2	--	--	--	--	--	--	--	--	--	--	--	2
Total	1,602	294	--	--	17,054	1,347	--	--	--	--	--	--	18	1,659
HARDWOODS														
Ash	1,666	297	2	--	219	17	--	--	--	--	--	--	--	315
Aspen	637	111	36	6	5,871	464	--		--	--	--	--	88	669
Balsam poplar	18	3	--	--	411	33	--	--	--	--	--	--	--	36
Basswood	2,166	387	152	25	66	5	--	--	--	--	--	--	--	417
Beech	545	97	126	20	--	--	--	--	--	--	--	--	--	118
White birch	225	40	4	1	331	26	--	--	--	--	--	--	--	67
Yellow birch	45	8	16	3	81	6	--	--	--	--	--	--	--	17
Cottonwood	241	43	26	4	1	--	--	--	--	--	--	--	--	47
Elm	475	85	--	--	6	--	--	--	--	--	--	--	--	85
Hard maple	3,206	536	292	48	725	57	--	--	--	--	--	--	--	641
Soft maple	3,568	637	69	11	654	52	--	--	--	--	--	--	--	700
Red oak	8,847	1,549	769	125	154	12	--	--	--	--	--	--	--	1,686
White oak	6,006	1,052	294	48	56	4	--	--	--	--	--	--	--	1,104
Walnut	406	73	20	3	--	--	--	--	--	--	--	--	--	76
Black cherry	459	82	2	--	6	--	--	--	--	--	--	--	--	83
Hackberry	277	49	--	--	--	--	--	--	--	--	--	--	--	49
Butternut	33	6	--	--	--	--	--	--	--	--	--	--	--	6
Other hardwoods	5	1	--	--	--	--	--	--	--	--	--	--	--	1
Total	28,824	5,056	1,807	294	8,581	678	--	--	--	--	--	--	88	6,116
All species	30,425	5,350	1,807	294	25,636	2,025	--	--	--	--	--	--	106	7,775

(Table 3 continued on next page)

(Table 3 continued)

SOUTHWEST UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Industrial fuelwood		Poles		Posts		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Pieces*	*MCF 3/*	*M pieces*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS														
Redcedar	23	5	--	--	--	--	--	--	--	--	--	--	--	5
Balsam fir	--	--	--	--	77	6	--	--	--	--	--	--	--	6
Hemlock	--	--	--	--	7	1	--	--	--	--	--	--	--	1
Jack pine	--	--	--	--	6,386	504	--	--	--	--	--	--	--	504
Red pine	1,625	277	--	--	36,879	2,913	--	--	--	--	104	107	3	3,300
White pine	1,444	246	3	1	4,034	319	--	--	--	--	--	--	3	567
Spruce	--	--	--	--	693	55	--	--	--	--	--	--	--	55
Tamarack	--	--	--	--	19	1	--	--	--	--	--	--	--	1
Total	3,092	527	3	1	48,094	3,799	--	--	--	--	104	107	6	4,439
HARDWOODS														
Ash	2,222	397	9	1	454	36	--	--	--	--	--	--	--	434
Aspen	4,112	718	118	19	28,537	2,254	--	--	--	--	--	--	383	3,375
Balsam poplar	--	--	--	--	1	--	--	--	--	--	--	--	--	--
Basswood	6,062	1,082	29	5	157	12	--	--	--	--	--	--	1	1,100
White birch	186	33	3	--	1,064	84	--	--	--	--	--	--	70	188
Yellow birch	29	5	--	--	58	5	--	--	--	--	--	--	--	10
Cottonwood	914	163	327	53	1	--	--	--	--	--	--	--	--	217
Elm	2,734	488	--	--	38	3	--	--	--	--	--	--	--	491
Hickory	154	27	--	--	--	--	--	--	--	--	--	--	--	27
Hard maple	8,285	1,384	101	16	1,234	98	--	--	--	--	--	--	--	1,498
Soft maple	3,138	560	73	12	800	63	--	--	--	--	--	--	25	660
Red oak	64,351	11,268	2,279	371	609	48	--	--	--	--	--	--	6	11,693
White oak	20,583	3,604	2,328	379	89	7	--	--	--	--	1	1	57	4,048
Walnut	822	147	151	25	--	--	--	--	--	--	--	--	--	171
Butternut	55	10	--	--	--	--	--	--	--	--	--	--	--	10
Black cherry	678	121	11	2	117	9	--	--	--	--	--	--	--	132
Hackberry	1,271	227	--	--	--	--	--	--	--	--	--	--	--	227
Other hardwoods	915	163	--	--	--	--	--	--	--	--	--	--	--	163
Total	116,511	20,398	5,428	884	33,159	2,620	--	--	--	--	1	1	542	24,445
All species	119,604	20,925	5,432	884	81,252	6,418	--	--	--	--	105	108	547	28,883

1/ Based on factors obtained from the Wisconsin Utilization Study, 1983.

2/ Thousand board feet, International 1/4-inch rule.

3/ Thousand cubic feet.

4/ Standard cords are 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

Table 4.--Material harvested on timberland for industrial roundwood by source of material and species group, Wisconsin, 1992 1/

(In thousand cubic feet)

Species group	Growing stock				Non-growing stock						Total material used for products	Total material not used	Total material harvested
	Used for products		Logging residue		Used for products				Logging slash	Total non-growing stock			
	Saw-timber	Pole-timber	(not used)	Total	Limbwood	Saplings	Cull trees	Dead trees	(not used)				
SOFTWOODS													
Redcedar	4	1	0	5	0	0	0	0	2	2	5	2	7
N. white-cedar	274	114	32	420	8	6	2	1	107	123	404	139	543
Balsam fir	2,328	2,054	106	4,488	178	104	31	159	1,291	1,762	4,854	1,397	6,251
Hemlock	1,627	1,024	66	2,717	132	84	64	27	694	1,001	2,958	760	3,718
Jack pine	9,089	14,251	594	23,933	1,305	807	272	3,264	8,161	13,809	28,988	8,755	37,742
Red pine	19,292	11,065	773	31,131	1,428	897	633	299	8,175	11,432	33,615	8,948	42,563
White pine	5,953	1,675	298	7,925	237	122	106	61	2,394	2,919	8,153	2,692	10,845
Spruce	1,653	1,368	84	3,104	119	69	25	105	895	1,213	3,339	979	4,318
Tamarack	186	158	9	353	14	8	3	12	102	138	381	111	491
Total	40,405	31,710	1,962	74,077	3,421	2,097	1,135	3,928	21,819	32,400	82,696	23,781	106,477
HARDWOODS													
Ash	3,683	1,853	495	6,031	659	12	422	1,509	3,062	5,665	8,139	3,557	11,696
Aspen	74,241	36,415	7,211	117,867	3,664	65	6,246	1,790	42,775	54,539	122,420	49,986	172,406
Balsam poplar	163	149	19	330	57	2	31	108	173	371	509	192	701
Basswood	6,564	1,916	1,003	9,483	508	22	442	1,502	4,185	6,659	10,954	5,188	16,142
Beech	493	137	74	704	43	--	40	125	328	536	839	401	1,240
White birch	7,020	16,820	1,598	25,437	1,835	350	761	1,175	9,446	13,569	27,962	11,044	39,006
Yellow birch	1,062	446	150	1,657	158	2	114	376	814	1,465	2,158	964	3,122
Cottonwood	253	50	40	342	12	--	17	44	146	220	377	186	562
Elm	1,146	616	151	1,913	229	3	143	519	1,005	1,898	2,655	1,156	3,811
Hickory	21	3	3	27	--	--	1	3	12	16	28	16	43
Hard maple	15,799	5,802	1,660	23,260	2,094	33	1,563	4,077	10,895	18,662	29,367	12,555	41,922
Soft maple	8,879	6,491	1,197	16,567	1,391	257	1,579	674	6,697	10,597	19,270	7,894	27,164
Red oak	30,330	4,329	4,288	38,947	1,492	26	1,423	446	15,228	18,615	38,046	19,516	57,562
White oak	7,711	937	1,101	9,749	262	4	287	114	3,839	4,507	9,316	4,940	14,256
Black walnut	204	21	33	258	2	--	9	24	109	144	260	141	402
Butternut	51	6	8	65	1	--	2	7	30	39	67	38	104
Black cherry	563	307	74	944	115	1	72	257	495	940	1,315	569	1,884
Willow	--	--	--	--	--	--	--	--	--	--	--	--	--
Hackberry	303	39	47	388	4	--	10	45	178	236	400	225	624
Other hardwoods	126	15	19	160	1	--	4	18	73	97	164	93	257
Total	158,610	76,351	19,168	254,129	12,525	779	13,167	12,812	99,490	138,774	274,244	118,659	392,903
All species	199,015	108,061	21,130	328,206	15,946	2,876	14,302	16,741	121,309	171,174	356,940	142,439	499,379

1/ Factors for determining the amount of wood in each category are base on the Wisconsin Utilization Study, 1983.

Table 5.--Wisconsin pulpwood production by species group, 1946-1992

(In thousand standard cords, unpeeled) 1/

Year	Roundwood									Residue	
	Total	Pine	Balsam fir	Hemlock	Spruce	Cedar & tamarack	Aspen	Birch	Other hardwoods	Soft-woods	Hard-woods
1946	433	75	48	64	32	3	202	4	5	2/	2/
1947	497	157	53	50	31	6	187	8	5	2/	2/
1948	472	117	87	51	34	3	167	8	5	2/	2/
1949	427	72	78	47	33	1	184	10	--	2/	2
1950	468	93	69	47	31	2/	195	6	20	1	6
1951	565	102	55	51	30	1	281	28	17	--	--
1952	582	95	76	66	39	1	275	15	15	--	--
1953	553	71	45	51	26	1	306	12	41	--	--
1954	691	113	56	63	31	4	348	27	49	--	--
1955	710	121	48	58	23	4	365	16	75	--	--
1956	960	140	45	56	23	4	507	21	164	--	--
1957	934	126	60	57	27	6	453	27	178	--	--
1958	828	148	62	55	23	6	369	18	147	--	--
1959	972	186	52	49	21	6	431	26	159	5	37
1960	1,052	124	50	52	18	6	540	27	204	4	27
1961	1,078	154	61	47	23	7	530	34	201	3	18
1962	1,140	188	46	42	15	6	572	41	188	6	36
1963	1,302	170	60	52	19	6	613	50	233	13	86
1964	1,244	168	57	52	20	5	603	41	222	11	65
1965	1,253	207	50	60	15	4	607	24	197	14	75
1966	1,536	215	55	69	17	3	810	39	243	12	73
1967	1,417	174	48	42	13	3	739	84	203	10	101
1968	1,298	199	51	44	11	5	629	57	185	16	101
1969	1,450	216	50	51	13	2	697	62	238	15	106
1970	1,656	259	68	53	16	4	771	76	296	19	94
1971	1,552	268	54	42	12	3	736	51	269	16	101
1972	1,538	246	49	42	13	3	685	47	333	10	110
1973	1,758	232	67	32	16	1	761	73	400	21	155
1974	2,053	291	85	45	19	2	797	102	506	26	180
1975	1,505	240	98	45	25	4	588	83	244	36	142
1976	1,840	286	89	43	19	3	694	114	425	38	129
1977	1,816	297	73	43	19	5	696	103	383	48	149
1978	1,895	358	75	52	20	4	669	121	373	40	183
1979 3/	2,109	361	84	40	19	2	751	151	441	49	211
1980	2,362	388	101	34	32	4	873	185	456	40	249
1981	2,389	419	105	29	27	5	965	159	389	47	244
1982	2,285	494	103	33	28	7	884	154	339	42	201
1983	2,475	412	85	40	28	6	1,025	198	422	48	211
1984	2,647	483	84	25	42	4	1,067	208	439	47	248
1985	2,588	452	72	37	36	2	1,073	193	431	51	241
1986	2,926	500	46	37	30	2	1,208	283	528	52	240
1987	2,869	489	45	42	36	2	1,097	256	605	47	250
1988	3,084	574	71	46	43	4	1,171	279	606	56	234
1989	3,161	550	67	43	45	5	1,208	333	619	59	232
1990	3,093	620	66	38	49	9	1,096	331	657	48	179
1991	3,146	695	64	33	33	7	1,090	269	593	94	268
1992	3,307	695	61	29	41	5	1,216	307	655	63	235

1/ 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

2/ Less than 500 cords.

3/ Includes logs, bolts, and wood residue used in manufacturing particleboard and waferboard after 1979.

Table 6.-- Wisconsin pulpwood production by species group and destination, 1992

(In thousand standard cords, unpeeled) 1/

Class of material and species group	Total	Michigan	Minnesota	Wisconsin
ROUNDWOOD				
SOFTWOODS				
Cedar	--	--	--	--
Balsam fir	61	2	11	48
Hemlock	29	1	--	28
Jack pine	347	6	4	337
Red pine	306	2	1	303
White pine	42	--	--	42
Spruce	41	--	2	39
Tamarack	5	--	--	5
Total	831	11	18	802
HARDWOODS				
Ash	71	2	1	68
Aspen	1,215	48	25	1,142
Balsam poplar	6	5	--	1
Basswood	51	3	2	46
Beech	5	4	--	1
White birch	290	67	--	223
Yellow birch	17	2	--	15
Cottonwood	1	--	--	1
Elm	25	1	--	24
Hickory	--	--	--	--
Hard maple	226	51	--	175
Soft maple	173	27	4	142
Red oak	71	3	--	68
White oak	14	--	--	14
Other hardwoods	13	3	--	10
Total	2,178	216	32	1,930
Total roundwood	3,009	227	50	2,732
RESIDUES 2/				
Softwood	63	11	1	51
Hardwood	235	15	4	216
Total	298	26	5	267
ALL MATERIAL	3,307	253	55	2,999

1/ 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

2/ Chippable mill residues such as slabs, edgings, etc. Roundwood chips are included in roundwood.

Table 7.--Pulpwood production from roundwood by Forest Survey Unit, county, and species group, Wisconsin, 1992

(In standard cords, unpeeled)

Unit and county 1/	Species group										
	Cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tama-rack	Ash	Aspen	Balsam poplar
NORTHEAST											
Florence	--	2,785	3,190	563	2,280	157	2,647	--	1,005	40,449	768
Forest	--	6,223	1,531	983	5,807	244	4,625	386	5,012	37,617	747
Langlade	--	3,565	1,000	3,612	3,436	329	1,144	308	4,135	51,872	434
Lincoln	--	2,074	591	2,825	5,814	465	926	292	3,853	58,035	382
Marinette	2	4,374	150	22,937	16,232	1,059	2,185	534	1,267	67,541	444
Menominee	12	200	13,008	2,707	3,343	4,838	57	23	1,756	14,816	296
Oconto	--	554	125	6,438	12,708	419	103	15	646	33,764	611
Oneida	--	4,758	684	9,459	10,648	3,350	4,022	468	6,612	60,068	473
Shawano	--	49	953	259	3,560	104	223	23	659	16,766	235
Vilas	--	4,251	295	8,419	6,515	2,478	2,041	169	2,918	70,985	914
Total	14	28,832	21,527	58,200	70,342	13,441	17,973	2,219	27,863	451,914	5,305
NORTHWEST											
Ashland	--	5,306	545	8,776	2,172	1,060	4,695	253	3,628	29,541	14
Barron	--	13	32	2,731	2,460	163	302	--	486	18,757	2
Bayfield	--	2,273	66	44,157	7,339	488	1,662	78	2,475	97,182	13
Burnett	--	78	--	25,672	10,690	13	22	--	271	26,482	--
Douglas	--	6,892	24	34,893	11,378	109	900	--	847	56,624	--
Iron	202	7,220	2,157	3,904	2,398	657	5,400	297	3,711	67,574	99
Polk	--	13	--	2,221	979	--	15	--	148	9,730	--
Price	--	4,914	987	1,883	5,298	591	3,247	693	4,095	56,182	156
Rusk	--	265	304	903	1,979	136	754	363	4,880	37,621	45
Sawyer	--	2,296	298	2,871	3,426	976	1,748	483	6,232	54,612	65
Taylor	--	2,339	1,016	274	544	--	673	134	2,671	49,834	49
Washburn	--	317	13	14,565	7,792	224	278	--	2,351	50,308	1
Total	202	31,924	5,441	142,850	56,456	4,418	19,695	2,301	31,795	554,448	443
CENTRAL											
Adams	--	--	--	39,000	27,116	3,806	23	--	294	1,829	--
Chippewa	--	46	86	874	2,284	116	141	11	1,963	37,108	19
Clark	--	--	--	2,840	3,490	470	--	66	2,886	48,999	16
Eau Claire	--	--	12	10,782	7,874	317	34	--	616	10,845	3
Jackson	--	12	--	32,732	7,912	1,477	89	42	607	16,544	4
Juneau	--	--	--	19,715	7,999	932	24	--	273	707	1
Marathon	--	228	1,137	2,318	5,158	644	895	--	2,212	31,249	34
Marquette	--	7	--	1,037	9,865	1,807	24	--	57	--	--
Monroe	--	6	--	8,143	6,678	774	88	--	246	547	--
Portage	--	11	244	4,908	10,573	1,556	110	29	424	5,849	17
Waupaca	--	50	486	713	10,456	988	105	--	389	6,759	1
Waushara	--	--	--	1,631	23,314	3,778	38	--	72	1,334	--
Wood	--	4	44	4,263	6,269	1,357	49	19	579	13,475	2
Total	--	364	2,008	128,955	128,988	18,022	1,618	167	10,617	175,246	97

(Table 7 continued on next page)

(Table 7 continued)

WISCONSIN

Unit and county 1/	Species group										
	Cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar
SOUTHWEST											
Buffalo	--	--	--	121	2,184	267	85	--	24	2,588	--
Crawford	--	--	--	--	11	--	--	--	--	--	--
Dunn	--	25	--	3,241	11,225	416	73	19	295	9,103	1
Grant	--	--	--	10	143	--	--	--	--	14	--
Iowa	--	--	--	142	2,021	336	--	--	--	--	--
La Crosse	--	--	--	1,143	947	246	100	--	44	23	--
Lafayette	--	--	--	12	--	18	--	--	--	--	--
Pepin	--	26	--	81	744	89	11	--	--	636	--
Pierce	--	--	--	79	96	9	22	--	1	292	--
Richland	--	--	--	38	200	164	--	--	2	--	--
Sauk	--	12	7	917	9,059	1,484	184	--	24	9	--
St. Croix	--	14	--	242	1,485	82	86	--	3	13,196	--
Trempealeau	--	--	--	360	8,532	910	131	--	61	2,676	--
Vernon	--	--	--	--	232	13	--	--	--	--	--
Total	--	77	7	6,386	36,879	4,034	693	19	454	28,537	1
SOUTHEAST											
Brown	--	--	--	11	163	--	--	--	19	3,850	411
Columbia	--	--	--	393	5,132	730	81	--	11	88	--
Dane	--	--	--	23	266	93	10	--	19	--	--
Dodge	--	--	--	31	23	--	--	--	--	--	--
Door	--	--	--	--	26	--	--	--	3	55	--
Fond Du Lac	--	--	--	--	296	12	--	--	3	4	--
Green	--	--	--	221	325	78	--	--	2	--	--
Green Lake	--	--	--	34	1,013	174	--	--	5	14	--
Jefferson	--	--	--	309	1,648	190	--	--	--	--	--
Kenosha	--	11	--	13	--	--	--	--	--	14	--
Kewaunee	--	--	--	--	34	--	--	--	1	--	--
Manitowoc	--	--	9	--	33	3	17	--	27	--	--
Milwaukee	--	--	--	--	11	9	--	--	--	--	--
Outagamie	--	--	--	11	143	10	--	--	115	1,819	--
Ozaukee	--	9	--	--	21	38	--	--	--	--	--
Rock	--	--	--	25	1,877	133	31	--	--	--	--
Sheboygan	--	--	--	--	227	--	--	--	--	--	--
Walworth	--	--	--	28	15	12	--	--	--	--	--
Washington	--	--	--	--	41	13	16	--	--	--	--
Waukesha	--	--	--	11	1,790	793	390	--	--	--	--
Winnebago	--	--	--	--	--	--	--	--	14	28	--
Total	--	20	9	1,110	13,082	2,288	545	--	219	5,871	411
State total	216	61,217	28,992	337,501	305,747	42,204	40,524	4,706	70,948	1,216,016	6,257

(Table 7 continued on next page)

(Table 7 continued)

WISCONSIN

Unit and county 1/	Species group												
	Bass-wood	Beech	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Other hardwood	All species
NORTHEAST													
Florence	1,143	618	9,753	423	24	300	--	10,237	6,138	998	208	439	84,125
Forest	2,148	494	16,691	1,643	50	3,670	--	18,838	13,566	2,678	1,337	399	124,689
Langlade	2,736	271	12,676	1,466	76	2,681	--	15,779	10,242	2,723	964	439	119,888
Lincoln	5,345	49	10,789	496	151	1,539	--	8,476	5,328	5,589	389	1,020	114,427
Marinette	1,389	1,064	13,899	502	21	181	--	16,133	9,166	1,188	138	772	161,180
Menominee	206	130	2,628	882	1	785	--	6,866	7,001	2,606	194	295	62,649
Oconto	487	405	7,295	355	6	139	--	6,736	3,985	530	126	286	75,733
Oneida	8,848	168	24,840	706	242	399	--	16,680	9,553	9,895	949	1,836	174,658
Shawano	162	11	1,540	288	4	150	--	2,297	2,269	690	127	26	30,393
Vilas	3,656	451	38,598	893	93	924	--	13,305	8,853	2,465	597	553	169,373
Total	26,121	3,661	138,710	7,654	668	10,767	--	115,345	76,100	29,363	5,029	6,065	1,117,115
NORTHWEST													
Ashland	934	11	9,727	839	14	518	--	9,984	7,050	2,693	1,245	242	89,245
Barron	175	--	2,246	66	2	44	--	1,157	1,144	630	79	106	30,595
Bayfield	1,409	1	24,839	542	13	211	--	5,511	6,323	1,884	523	256	197,244
Burnett	33	--	1,891	61	--	9	--	855	1,071	138	44	120	67,449
Douglas	824	--	12,192	36	--	8	--	1,071	4,243	165	59	19	130,285
Iron	2,836	485	9,476	863	61	1,231	--	14,653	9,139	4,031	727	862	137,983
Polk	43	1	546	19	--	4	--	1,229	333	213	13	39	15,545
Price	5,682	33	15,373	641	156	1,217	--	9,373	6,999	5,049	553	955	124,080
Rusk	2,795	13	15,004	932	45	599	--	14,054	10,155	5,902	944	1,080	98,771
Sawyer	2,547	19	22,285	1,865	65	1,613	--	14,272	10,646	3,583	1,254	540	131,694
Taylor	2,033	123	5,749	866	49	3,760	--	7,163	6,821	1,756	291	284	86,429
Washburn	159	--	7,693	160	1	359	--	2,781	3,656	709	122	114	91,604
Total	19,471	686	127,022	6,890	405	9,575	--	82,103	67,580	26,752	5,853	4,615	1,200,925
CENTRAL													
Adams	120	--	588	12	--	2	--	673	308	2,865	303	106	77,044
Chippewa	1,268	9	5,303	165	19	288	--	4,608	3,918	3,271	184	605	62,287
Clark	999	11	7,236	559	16	730	--	6,776	7,440	1,538	710	252	85,035
Eau Claire	212	6	1,508	135	3	260	--	1,623	1,467	573	162	99	36,534
Jackson	225	--	2,410	122	4	108	--	1,753	3,431	808	358	59	68,697
Juneau	119	--	535	26	1	6	--	997	888	996	326	73	33,619
Marathon	1,261	70	2,488	808	34	2,770	--	5,614	4,657	1,786	285	241	63,890
Marquette	15	--	71	13	--	19	--	136	140	163	9	20	13,381
Monroe	27	--	555	17	--	31	--	354	470	141	30	125	18,232
Portage	551	2	712	101	17	66	--	1,333	1,017	372	76	56	28,023
Waupaca	69	3	283	173	1	81	--	1,444	1,564	482	40	46	24,132
Waushara	26	--	120	15	--	4	--	182	146	261	12	18	30,950
Wood	147	--	1,205	86	2	76	--	1,341	2,320	405	150	41	31,834
Total	5,039	101	23,015	2,233	97	4,442	--	26,835	27,766	13,660	2,648	1,740	573,656

(Table 7 contined on next page)

(Table 7 continued)

WISCONSIN

Unit and county 1/	Species group												
	Bass-wood	Beech	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Other hardwood	All species
SOUTHWEST													
Buffalo	3	--	56	6	--	1	--	68	47	14	9	--	5,473
Crawford	--	--	--	--	--	--	--	10	--	--	--	--	22
Dunn	130	--	585	23	1	5	--	689	352	475	38	86	26,782
Grant	--	--	--	--	--	--	--	--	--	--	--	--	167
Iowa	--	--	--	--	--	--	--	--	--	--	--	--	2,499
La Crosse	5	--	103	10	--	2	--	123	85	25	18	1	2,875
Lafayette	--	--	--	--	--	--	--	--	--	--	--	--	30
Pepin	--	--	--	--	--	--	--	--	--	--	--	--	1,567
Pierce	--	--	--	--	--	2	--	2	2	--	--	--	505
Richland	--	--	--	2	--	--	--	7	13	13	1	--	439
Sauk	3	--	57	6	--	1	--	183	163	15	9	1	12,136
St. Croix	--	--	129	2	--	10	--	9	9	--	--	--	15,267
Trempealeau	16	--	132	8	--	17	--	144	129	68	14	28	13,226
Vernon	--	--	--	--	--	--	--	--	--	--	--	--	245
Total	157	--	1,064	58	1	38	--	1,234	800	609	89	117	81,252
SOUTHEAST													
Brown	20	--	8	10	1	--	--	74	81	17	2	2	4,660
Columbia	1	--	22	4	--	1	--	33	32	19	5	--	6,552
Dane	2	--	44	4	--	1	--	52	36	10	7	--	568
Dodge	--	--	--	--	--	--	--	--	--	--	--	--	54
Door	--	--	1	1	--	--	--	12	12	--	--	--	110
Fond Du Lac	--	--	2	2	--	--	--	14	14	--	--	--	357
Green	--	--	5	1	--	--	--	7	5	1	1	--	646
Green Lake	1	--	10	2	--	--	--	16	15	14	2	1	1,302
Jefferson	--	--	--	--	--	--	--	--	--	--	--	--	2,147
Kenosha	--	--	--	--	--	--	--	--	--	--	--	--	38
Kewaunee	--	--	1	--	--	--	--	3	3	--	--	--	42
Manitowoc	--	--	14	13	--	--	--	107	107	--	--	--	330
Milwaukee	--	--	--	--	--	--	--	--	--	--	--	--	20
Outagamie	40	--	194	41	--	4	--	370	322	82	33	3	3,187
Ozaukee	--	--	--	--	--	--	--	--	--	--	--	--	69
Rock	--	--	--	--	--	--	--	--	--	--	--	--	2,066
Sheboygan	--	--	--	--	--	--	--	--	--	--	--	--	227
Walworth	--	--	--	--	--	--	--	--	--	--	--	--	55
Washington	--	--	--	--	--	--	--	--	--	--	--	--	69
Waukesha	--	--	--	--	--	--	--	--	--	--	--	--	2,984
Winnebago	2	--	29	3	--	--	--	36	27	10	5	--	155
Total	66	--	331	81	1	6	--	725	654	154	56	6	25,636
State total	50,854	4,448	290,140	16,916	1,172	24,829	--	226,242	172,900	70,537	13,675	12,543	2,998,584

1/ Includes only those counties that supplied pulpwood in 1992.

Table 8.--Pulpwood receipts in Wisconsin by species group, 1946-1992

(In thousand standard cords, unpeeled) 1/

	Roundwood									Residue	
Year	Total	Pine	Balsam fir	Hemlock	Spruce	Cedar & tamarack	Aspen	Birch	Other hardwoods	Soft-woods	Hard-woods
1946	1,902	298	280	233	645	16	416	14	2/	2/	2/
1947	1,722	292	230	134	687	19	346	13	2/	2/	1
1948	1,741	307	279	136	663	5	333	17	2/	2/	1
1949	1,426	227	244	101	502	3	332	15	2/	2/	2
1950	1,442	244	238	91	441	3	387	10	21	1	6
1951	2,097	428	232	120	678	10	569	42	18	--	--
1952	2,059	365	288	131	732	6	490	32	15	--	--
1953	1,689	283	179	76	529	2	552	26	42	--	--
1954	1,919	298	228	125	608	5	566	40	49	--	--
1955	1,777	319	199	92	471	5	590	26	75	--	--
1956	2,136	397	195	143	445	9	754	27	166	--	--
1957	2,247	325	254	116	578	14	739	38	183	--	--
1958	1,866	318	200	90	479	18	583	19	159	--	--
1959	1,881	436	169	87	345	17	619	30	165	7	6
1960	2,114	388	176	97	389	26	785	31	208	7	7
1961	1,972	330	177	92	350	19	741	44	196	12	11
1962	2,124	395	155	99	317	19	784	49	206	51	49
1963	2,429	414	175	114	341	22	877	64	235	96	91
1964	2,271	350	139	110	314	20	855	62	233	96	92
1965	2,290	410	114	120	300	19	899	26	219	91	92
1966	2,701	473	139	162	301	11	1,112	44	270	100	89
1967	2,729	415	140	100	308	42	1,115	91	259	135	124
1968	2,226	405	100	86	200	33	860	59	205	160	118
1969	2,514	456	81	112	208	25	978	63	278	192	121
1970	2,821	498	111	118	208	43	1,088	81	333	189	152
1971	2,581	514	88	83	167	37	1,011	53	295	193	140
1972	2,450	443	82	69	181	31	902	48	354	198	142
1973	2,696	387	103	54	224	28	1,006	68	398	279	149
1974	3,135	508	133	69	161	36	1,109	115	558	257	189
1975	2,344	391	155	73	146	30	791	89	288	216	165
1976	2,713	437	137	66	121	34	926	133	486	256	117
1977	2,596	416	109	43	94	31	915	120	445	299	124
1978	2,676	491	99	50	82	25	888	145	450	301	145
1979 3/	3,067	567	115	39	76	21	999	178	548	332	192
1980	3,266	518	147	40	94	34	1,118	231	562	268	254
1981	3,154	512	135	31	86	31	1,182	189	477	252	259
1982	2,978	565	131	36	79	37	1,092	173	434	209	222
1983	3,114	470	114	43	65	27	1,220	217	502	222	234
1984	3,301	540	108	26	95	15	1,269	228	552	204	264
1985	3,104	500	97	39	80	4	1,250	202	494	198	240
1986	3,270	543	59	40	63	4	1,370	240	518	192	241
1987	3,130	538	45	46	73	3	1,199	220	592	157	257
1988	3,287	641	59	48	97	6	1,223	233	555	181	244
1989	3,339	627	60	45	104	6	1,247	274	582	150	244
1990	3,334	685	59	41	125	13	1,158	277	628	177	171
1991	3,311	766	50	33	95	9	1,181	206	539	174	258
1992	3,533	775	54	31	112	7	1,309	268	594	163	220

1/ 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

2/ Less than 500 cords.

3/ Includes logs, bolts, and wood residue used in manufacturing particleboard and waferboard after 1979.

Table 9.--Pulpwood receipts in Wisconsin by area of origin, 1960-1992

(In thousand standard cords, unpeeled) 1/

Year	All areas	Area of origin				
		Michigan	Wisconsin	Minnesota	Other States	Canada
1960	2,115	510	1,008	308	82	207
1961	1,972	464	1,050	240	44	174
1962	2,124	540	1,114	216	108	146
1963	2,429	628	1,262	221	153	165
1964	2,272	588	1,207	193	135	149
1965	2,290	608	1,225	159	135	163
1966	2,701	666	1,501	193	185	156
1967	2,729	660	1,387	299	234	149
1968	2,227	455	1,259	166	223	124
1969	2,513	537	1,412	188	257	119
1970	2,820	610	1,627	219	249	115
1971	2,581	567	1,502	188	234	90
1972	2,450	470	1,493	166	230	91
1973	2,697	418	1,671	194	291	123
1974	3,135	534	2,004	261	269	67
1975	2,344	449	1,460	178	177	80
1976	2,713	434	1,784	182	203	110
1977	2,596	407	1,713	154	227	95
1978	2,676	404	1,779	162	242	89
1979 2/	3,067	516	2,024	169	266	92
1980	3,266	490	2,298	216	170	92
1981	3,155	419	2,320	177	164	75
1982	2,979	396	2,231	179	131	42
1983	3,114	391	2,399	155	137	32
1984	3,301	442	2,534	184	134	7
1985	3,104	392	2,465	105	127	15
1986	3,270	369	2,693	69	116	23
1987	3,130	313	2,644	62	90	21
1988	3,288	311	2,771	79	102	25
1989	3,338	319	2,799	116	90	14
1990	3,334	313	2,768	127	107	19
1991	3,309	304	2,799	101	88	17
1992	3,534	323	2,997	105	103	6

1/ 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

2/ Includes logs, bolts, and wood residue used in manufacturing particleboard and waferboard after 1979.

Table 10.--Pulpwood receipts in Wisconsin by species group and area of origin, 1992

(In thousand standard cords, unpeeled) 1/

Type of material and species group	Total receipts	Origin of material				
		Michigan	Minnesota	Wisconsin	Other U.S.	Canada
ROUNDWOOD						
SOFTWOODS						
Cedar	--	--	--	--	--	--
Balsam fir	54	6	--	48	--	--
Hemlock	31	3	--	28	--	--
Jack pine	418	75	6	337	--	--
Red pine	315	8	4	303	(2/)	--
White pine	42	(2/)	(2/)	42	--	--
Spruce	113	45	29	39	--	--
Tamarack	7	1	1	5	--	--
Total	980	138	40	802	--	--
HARDWOODS						
Ash	69	2	--	67	--	--
Aspen	1,309	124	43	1,142	--	--
Balsam poplar	1	(2/)	--	1	--	--
Basswood	48	2	--	46	--	--
Beech	1	(2/)	--	1	--	--
White birch	248	3	22	223	--	--
Yellow birch	20	5	--	15	--	--
Cottonwood	1	(2/)	--	1	--	--
Elm	25	1	--	24	--	--
Hickory	(2/)	--	--	(2/)	--	--
Hard maple	201	26	--	175	--	--
Soft maple	153	11	(2/)	142	--	--
Red oak	70	2	--	68	--	--
White oak	14	(2/)	--	14	--	--
Other hardwoods	11	1	--	10	--	--
Total	2,171	177	65	1,929	--	--
All species	3,151	315	105	2,731	--	--
RESIDUES 3/						
Softwood	164	3	1	51	103	6
Hardwood	220	4	--	216	--	--
Total	384	7	1	267	103	6
ALL MATERIAL	3,535	322	106	2,998	103	6

1/ 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

2/ Less than 500 cords.

3/ Chippable mill residues such as slabs, edgings, etc. Roundwood chips are included in roundwood.

Table 11.--Saw-log production and receipts in Wisconsin by species group, 1990 and 1992

(In thousand board feet) 1/

Species group	Production			Receipts		
	1990	1992	Change	1990	1992	Change
SOFTWOODS						
Cedar	1,157	1,160	3	1,401	1,077	-324
Balsam fir	357	144	-213	452	174	-278
Hemlock	8,958	3,595	-5,363	9,129	4,057	-5,072
Jack pine	5,632	11,166	5,534	7,364	4,890	-2,474
Red pine	33,890	51,890	18,000	37,992	42,199	4,207
White pine	28,286	26,448	-1,838	30,231	24,961	-5,270
Spruce	339	444	105	380	394	14
Tamarack	31	26	-5	243	42	-201
Total	78,650	94,873	16,223	87,192	77,794	-9,398
HARDWOODS						
Ash	18,200	13,851	-4,349	18,913	13,895	-5,018
Aspen	90,379	99,891	9,512	99,532	105,024	5,492
Balsam poplar	294	78	-216	346	78	-268
Basswood	33,734	34,729	995	38,942	37,702	-1,240
Beech	954	2,306	1,352	951	1,727	776
White birch	18,868	22,916	4,048	20,370	25,839	5,469
Yellow birch	9,432	3,952	-5,480	10,430	4,793	-5,637
Cottonwood	755	1,259	504	648	1,225	577
Elm	4,357	3,883	-474	4,435	2,629	-1,806
Hickory	1,965	154	-1,811	1,845	--	-1,845
Hard maple	68,789	63,170	-5,619	75,564	71,990	-3,574
Soft maple	35,998	30,421	-5,577	37,541	32,679	-4,862
Red oak	175,097	166,953	-8,144	175,957	171,630	-4,327
White oak	42,907	43,526	619	43,034	44,267	1,233
Walnut	549	1,234	685	631	1,120	489
Other hardwoods	2,664	5,286	2,622	2,752	4,684	1,932
Total	504,942	493,606	-11,336	531,891	519,282	-12,609
All species	583,592	588,479	4,887	619,083	597,076	-22,007

1/ *International 1/4-inch rule.*

Table 12.--Saw-log production by Forest Survey Unit, species group, and State of destination, Wisconsin, 1992

(Thousand board feet) 1/

	ALL UNITS					
Species	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin
SOFTWOODS						
Redcedar	23	--	--	--	--	23
N. white-cedar	1,137	--	--	83	--	1,054
Balsam fir	144	--	--	25	--	119
Hemlock	3,595	--	--	--	--	3,595
Jack pine	11,166	--	--	--	7,696	3,470
Red pine	51,890	--	--	1,615	11,390	38,884
White pine	26,448	--	--	13	2,760	23,676
Spruce	444	--	--	--	149	295
Tamarack	26	--	--	--	--	26
Total	94,873	--	--	1,735	21,996	71,141
HARDWOODS						
Ash	13,851	113	156	81	--	13,501
Aspen	99,891	--	--	848	34	99,010
Balsam poplar	78	--	--	--	--	78
Basswood	34,729	28	528	151	--	34,023
Beech	2,306	--	--	719	--	1,587
White birch	22,916	--	--	103	--	22,813
Yellow birch	3,952	--	--	152	--	3,800
Cottonwood	1,259	126	129	--	--	1,004
Elm	3,883	1,557	10	1	--	2,317
Hickory	154	--	154	--	--	--
Hard maple	63,170	--	179	1,225	32	61,733
Soft maple	30,421	7	256	506	--	29,652
Red oak	166,953	446	2,319	2,727	23	161,438
White oak	43,526	604	1,123	--	32	41,766
Walnut	1,234	22	160	--	--	1,052
Black cherry	1,788	48	33	4	--	1,704
Willow	1	--	--	--	--	1
Hackberry	2,204	--	--	--	--	2,204
Butternut	373	--	--	--	--	373
Other hardwoods	920	18	900	--	--	2
Total	493,606	2,967	5,946	6,516	121	478,057
All species	588,479	2,967	5,946	8,251	22,117	549,198

(Table 12 continued)

Species	CENTRAL UNIT					
	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin
SOFTWOODS						
N. white-cedar	39	--	--	--	--	39
Hemlock	144	--	--	--	--	144
Jack pine	354	--	--	--	--	354
Red pine	4,214	--	--	--	--	4,214
White pine	7,143	--	--	--	--	7,143
Total	11,894	--	--	--	--	11,894
HARDWOODS						
Ash	3,496	--	--	--	--	3,496
Aspen	14,583	--	--	--	--	14,583
Basswood	6,069	--	--	--	--	6,069
Beech	80	--	--	--	--	80
White birch	838	--	--	--	--	838
Yellow birch	553	--	--	--	--	553
Cottonwood	67	--	--	--	--	67
Elm	379	--	--	--	--	379
Soft maple	8,076	--	--	--	--	8,076
Hard maple	10,642	--	--	--	--	10,642
Red oak	46,557	--	--	--	--	46,557
White oak	10,912	--	--	--	--	10,912
Walnut	4	--	--	--	--	4
Butternut	117	--	--	--	--	117
Hackberry	340	--	--	--	--	340
Black cherry	165	--	--	--	--	165
Total	102,878	--	--	--	--	102,878
All species	114,772	--	--	--	--	114,772

(Table 12 continued on next page)

(Table 12 continued)

Species	NORTHEAST UNIT					
	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin
SOFTWOODS						
N. white-cedar	573	--	--	83	--	490
Balsam fir	92	--	--	25	--	67
Hemlock	3,261	--	--	--	--	3,261
Jack pine	1,817	--	--	--	--	1,817
Red pine	19,847	--	--	1,615	--	18,232
White pine	9,658	--	--	13	--	9,645
Spruce	209	--	--	--	--	209
Tamarack	11	--	--	--	--	11
Total	35,468	--	--	1,735	--	33,732
HARDWOODS						
Ash	3,985	--	--	81	--	3,904
Aspen	51,835	--	--	848	--	50,988
Balsam poplar	60	--	--	--	--	60
Basswood	9,223	--	--	122	--	9,101
Beech	1,676	--	--	534	--	1,143
White birch	13,917	--	--	96	--	13,821
Yellow birch	2,415	--	--	101	--	2,313
Cottonwood	34	--	--	--	--	34
Elm	215	--	--	1	--	215
Hard maple	31,130	--	--	782	--	30,349
Soft maple	10,574	--	--	396	--	10,177
Red oak	19,693	--	--	2,424	--	17,268
White oak	3,053	--	--	--	--	3,053
Hackberry	204	--	--	--	--	204
Butternut	90	--	--	--	--	90
Black cherry	442	--	--	--	--	442
Willow	1	--	--	--	--	1
Total	148,546	--	--	5,384	--	143,162
All species	184,014	--	--	7,120	--	176,894

(Table 12 continued on next page)

(Table 12 continued)

Species	NORTHWEST					
	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin
SOFTWOODS						
N. white-cedar	25	--	--	--	--	25
Balsam fir	52	--	--	--	--	52
Hemlock	48	--	--	--	--	48
Jack pine	8,971	--	--	--	7,696	1,275
Red pine	26,120	--	--	--	11,390	14,730
White pine	7,374	--	--	--	2,760	4,614
Spruce	223	--	--	--	149	74
Tamarack	4	--	--	--	--	4
Total	42,818	--	--	--	21,996	20,822
HARDWOODS						
Ash	2,481	--	--	--	--	2,481
Aspen	28,723	--	--	--	33	28,691
Basswood	11,209	--	--	29	--	11,180
Beech	4	--	--	--	--	4
White birch	7,750	--	--	--	--	7,750
Yellow birch	910	--	--	29	--	881
Cottonwood	3	--	--	--	--	3
Elm	80	--	--	--	--	80
Hard maple	9,907	--	--	195	--	9,712
Soft maple	5,065	--	--	43	--	5,022
Red oak	27,505	--	--	300	--	27,205
White oak	2,973	--	--	--	--	2,973
Walnut	1	--	--	--	--	1
Hackberry	112	--	--	--	--	112
Butternut	78	--	--	--	--	78
Black cherry	44	--	--	4	--	40
Total	96,847	--	--	600	33	96,214
All species	139,665	--	--	600	22,029	117,036

(Table 12 continued on next page)

(Table 12 continued)

Species	SOUTHEAST					
	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin
SOFTWOODS						
N. white-cedar	499	--	--	--	--	499
Hemlock	143	--	--	--	--	143
Jack pine	24	--	--	--	--	24
Red pine	84	--	--	--	--	84
White pine	829	--	--	--	--	829
Spruce	12	--	--	--	--	12
Tamarack	11	--	--	--	--	11
Total	1,602	--	--	--	--	1,602
HARDWOODS						
Ash	1,666	48	--	--	--	1,618
Aspen	637	--	--	--	--	637
Balsam poplar	18	--	--	--	--	18
Basswood	2,166	2	--	--	--	2,164
Beech	545	--	--	186	--	359
White birch	225	--	--	6	--	218
Yellow birch	45	--	--	22	--	24
Cottonwood	241	30	--	--	--	212
Elm	475	--	--	--	--	475
Hard maple	3,206	--	--	248	--	2,957
Soft maple	3,568	2	--	67	--	3,498
Red oak	8,847	--	--	2	--	8,845
White oak	6,006	--	--	--	--	6,006
Walnut	406	3	--	--	--	404
Butternut	33	--	--	--	--	33
Hackberry	277	--	--	--	--	277
Black cherry	459	2	--	--	--	456
Other hardwoods	5	3	--	--	--	2
Total	28,824	90	--	531	--	28,202
All species	30,425	90	--	531	--	29,804

(Table 12 continued on next page)

(Table 12 continued)

Species	SOUTHWEST UNIT					
	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin
SOFTWOODS						
Redcedar	23	--	--	--	--	23
Red pine	1,625	--	--	--	--	1,625
White pine	1,444	--	--	--	--	1,444
Total	3,092	--	--	--	--	3,092
HARDWOODS						
Ash	2,222	64	156	--	--	2,002
Aspen	4,112	--	--	--	1	4,111
Basswood	6,062	26	528	--	--	5,509
White birch	186	--	--	--	--	186
Yellow birch	29	--	--	--	--	29
Cottonwood	914	97	129	--	--	689
Elm	2,734	1,557	10	--	--	1,168
Hickory	154	--	154	--	--	--
Hard maple	8,285	--	179	--	32	8,073
Soft maple	3,138	4	256	--	--	2,878
Red oak	64,351	446	2,319	--	23	61,563
White oak	20,583	604	1,123	--	32	18,823
Walnut	822	19	160	--	--	643
Butternut	55	--	--	--	--	55
Black cherry	678	45	33	--	--	600
Hackberry	1,271	--	--	--	--	1,271
Other hardwoods	915	15	900	--	--	--
Total	116,511	2,877	5,946	--	88	107,600
All species	119,604	2,877	5,946	--	88	110,692

1/ International 1/4-inch rule.

Table 13.--Saw-log production by Forest Survey Unit, county, and species group, Wisconsin, 1992

(In thousand board feet) 1/

Unit and county	Red-cedar	N. white-cedar	Balsam fir	Hem-lock	Jack pine	Red pine	White pine	Spruce	Tama-rack	Total softwoods	Ash	Aspen	Balsam poplar	Bass-wood	Beech	White birch
CENTRAL UNIT																
Adams	--	--	--	--	2	375	221	--	--	598	56	153	--	51	--	6
Chippewa	--	--	--	--	--	1,487	422	--	--	1,909	489	4,241	--	1,031	--	26
Clark	--	--	--	3	114	375	602	--	--	1,094	365	2,844	--	823	--	169
Eau Claire	--	--	--	--	2	131	75	--	--	208	8	306	--	29	--	18
Jackson	--	--	--	--	104	391	671	--	--	1,167	75	898	--	154	--	44
Juneau	--	--	--	--	3	294	347	--	--	645	96	567	--	126	--	14
Marathon	--	1	--	44	7	591	1,659	--	--	2,302	1,540	3,002	--	2,683	6	443
Marquette	--	--	--	--	1	40	290	--	--	331	52	36	--	65	--	5
Monroe	--	--	--	--	4	147	442	--	--	593	160	737	--	202	--	16
Portage	--	--	--	50	57	98	886	--	--	1,090	53	462	--	98	--	39
Waupaca	--	38	--	46	--	6	428	--	--	518	502	463	--	596	75	12
Waushara	--	--	--	--	2	146	412	--	--	561	22	102	--	108	--	8
Wood	--	--	--	--	57	133	689	--	--	878	79	773	--	103	--	39
Total	--	39	--	144	354	4,214	7,143	--	--	11,894	3,496	14,583	--	6,069	80	838
NORTHEAST UNIT																
Florence	--	2	7	455	58	678	182	13	--	1,394	125	2,087	--	803	11	1,714
Forest	--	95	35	415	9	2,347	433	30	--	3,365	394	8,788	--	2,401	8	3,172
Langlade	--	42	--	6	17	287	154	--	--	507	477	3,286	--	1,435	10	1,624
Lincoln	--	--	10	14	42	1,238	639	20	--	1,963	436	3,521	--	810	--	483
Marinette	--	126	30	373	114	2,545	148	3	2	3,342	698	12,726	60	1,223	263	2,604
Menominee	--	8	--	1,837	--	272	3,264	--	--	5,380	266	608	--	703	810	1
Oconto	--	--	--	--	29	4,218	189	--	--	4,436	331	7,095	--	207	149	1,372
Oneida	--	41	5	40	440	4,622	2,144	50	--	7,342	210	6,988	--	465	0	1,293
Shawano	--	251	--	114	8	144	379	1	1	898	752	1,830	--	924	426	127
Vilas	--	9	4	6	1,102	3,494	2,125	91	9	6,841	296	4,906	--	253	--	1,526
Total	--	573	92	3,261	1,817	19,847	9,658	209	11	35,468	3,985	51,835	60	9,223	1,676	13,917
NORTHWEST UNIT																
Ashland	--	11	6	15	246	970	756	6	1	2,012	138	517	--	1,060	--	1,181
Barron	--	--	--	--	1	712	662	--	1	1,376	123	2,955	--	382	--	90
Bayfield	--	1	26	4	2,690	12,679	2,201	138	--	17,740	86	787	--	105	--	912
Burnett	--	--	--	--	2,172	2,248	593	--	--	5,013	17	2,142	--	157	--	106
Douglas	--	1	1	--	2,275	3,070	398	1	--	5,746	3	1,363	--	--	--	213
Iron	--	5	--	3	94	161	116	22	--	401	97	443	--	642	--	203
Polk	--	--	--	--	27	642	79	--	--	748	46	1,991	--	291	--	3
Price	--	5	13	10	39	2,415	785	41	2	3,310	734	3,807	--	1,631	--	1,059
Rusk	--	--	--	--	--	219	401	2	--	623	475	5,511	--	2,661	--	198
Sawyer	--	--	--	8	136	954	904	5	--	2,007	324	4,119	--	2,269	--	2,067
Taylor	--	--	5	7	--	3	308	--	--	323	405	1,964	--	1,918	1	715
Washburn	--	2	--	--	1,291	2,045	172	8	--	3,518	33	3,125	--	93	3	1,004
Total	--	25	52	48	8,971	26,120	7,374	223	4	42,818	2,481	28,723	--	11,209	4	7,750

(Table 13 continued on next page)

(Table 13 continued)

Unit and county	Red-cedar	N. white-cedar	Balsam fir	Hem-lock	Jack pine	Red pine	White pine	Spruce	Tama-rack	Total softwoods	Ash	Aspen	Balsam poplar	Bass-wood	Beech	White birch
SOUTHEAST UNIT																
Brown	–	80	–	30	–	–	107	–	–	216	70	77	–	147	111	26
Calumet	–	22	–	–	–	–	19	3	–	44	60	14	–	120	23	–
Columbia	–	–	–	–	–	–	64	–	–	64	37	24	–	79	–	–
Dane	–	1	–	–	–	–	6	1	–	8	36	31	–	271	–	–
Dodge	–	3	–	–	–	2	10	–	–	16	104	5	–	155	–	–
Door	–	95	–	18	2	23	76	–	–	214	69	343	–	22	71	98
Fond Du Lac	–	–	–	–	–	–	–	1	–	1	57	–	–	3	–	–
Green	–	–	–	–	–	–	5	–	–	5	25	–	–	240	–	–
Green Lake	–	1	–	–	–	3	3	–	–	8	–	12	–	–	–	–
Jefferson	–	–	–	–	–	–	–	–	–	–	28	–	–	220	–	–
Kenosha	–	–	–	–	–	–	–	–	–	–	4	–	–	–	–	–
Kewaunee	–	120	–	50	–	27	25	–	11	233	160	48	18	49	49	43
Manitowoc	–	141	–	45	22	23	418	4	–	652	237	58	–	294	187	26
Milwaukee	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–
Outagamie	–	26	–	–	–	–	65	–	–	90	272	1	–	239	43	28
Ozaukee	–	1	–	–	–	–	–	–	–	1	15	–	–	38	–	–
Racine	–	–	–	–	–	–	–	–	–	–	15	–	–	–	–	–
Rock	–	1	–	–	–	1	1	1	–	6	37	–	–	7	–	–
Sheboygan	–	5	–	–	–	5	30	1	–	41	294	21	–	198	50	1
Walworth	–	–	–	–	–	–	–	–	–	–	16	–	–	–	–	–
Washington	–	–	–	–	–	–	–	–	–	0	52	–	–	27	1	–
Waukesha	–	2	–	–	–	–	–	–	–	2	37	3	–	57	–	–
Winnebago	–	–	–	–	–	–	–	–	–	–	39	–	–	–	10	1
Total	–	499	–	143	24	84	829	12	11	1,602	1,666	637	18	2,166	545	225
SOUTHWEST UNIT																
Buffalo	–	–	–	–	–	–	2	–	–	2	123	949	–	644	–	30
Crawford	–	–	–	–	–	–	–	–	–	–	120	78	–	396	–	2
Dunn	–	–	–	–	–	684	618	–	–	1,303	309	1,032	–	766	–	41
Grant	–	–	–	–	–	–	16	–	–	16	118	17	–	328	–	1
Iowa	–	–	–	–	–	–	127	–	–	127	69	20	–	153	–	–
La Crosse	–	–	–	–	–	27	–	–	–	27	97	137	–	196	–	45
Lafayette	–	–	–	–	–	–	2	–	–	2	20	1	–	138	–	–
Pepin	–	–	–	–	–	7	–	–	–	7	32	288	–	151	–	19
Pierce	–	–	–	–	–	125	15	–	–	140	325	166	–	828	–	11
Richland	–	–	–	–	–	22	49	–	–	71	359	199	–	626	–	1
Sauk	10	–	–	–	–	52	97	–	–	159	233	317	–	503	–	9
St. Croix	13	–	–	–	–	475	284	–	–	771	29	256	–	177	–	7
Trempealeau	–	–	–	–	–	6	5	–	–	12	58	426	–	367	–	18
Vernon	–	–	–	–	–	227	228	–	–	455	331	228	–	791	–	5
Total	23	–	–	–	–	1,625	1,444	–	–	3,092	2,222	4,112	–	6,062	–	186
State total	23	1,137	144	3,595	11,166	51,890	26,448	444	26	94,873	13,851	99,891	78	34,729	2,306	22,916

(Table 13 continued on next page)

(Table 13 continued)

Unit and county	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Hack-berry	Butter-nut	Black cherry	Willow	Other hardwoods	Total hardwoods	All species
CENTRAL UNIT																
Adams	5	16	10	--	52	96	1,110	266	--	13	2	--	--	--	1,835	2,433
Chippewa	6	32	--	--	629	1,075	5,621	1,164	--	18	7	5	--	--	14,346	16,255
Clark	24	--	25	--	1,027	1,673	5,055	1,228	--	4	10	13	--	--	13,260	14,354
Eau Claire	--	--	5	--	99	133	1,559	365	--	2	1	2	--	--	2,528	2,736
Jackson	4	--	18	--	124	457	5,734	1,516	--	29	11	31	--	--	9,093	10,260
Juneau	--	--	61	--	234	358	3,674	941	2	40	6	18	--	--	6,134	6,779
Marathon	479	--	121	--	5,423	1,521	5,705	867	--	76	28	20	--	--	21,912	24,214
Marquette	--	5	5	--	97	105	2,154	365	--	13	1	--	--	--	2,904	3,235
Monroe	--	2	59	--	297	445	6,683	1,931	2	73	5	46	--	--	10,659	11,252
Portage	--	--	8	--	214	232	1,467	421	--	--	3	--	--	--	2,998	4,089
Waupaca	33	5	52	--	2,164	1,488	3,625	593	--	48	37	30	--	--	9,722	10,239
Waushara	--	--	5	--	174	125	1,847	746	--	22	2	--	--	--	3,161	3,722
Wood	1	5	11	--	108	369	2,322	509	--	2	4	--	--	--	4,325	5,203
Total	553	67	379	--	10,642	8,076	46,557	10,912	4	340	117	165	--	--	102,878	114,772
NORTHEAST UNIT																
Florence	338	--	8	--	3,025	281	445	11	--	--	3	21	--	--	8,872	10,266
Forest	835	--	63	--	9,683	1,442	1,974	23	--	3	18	156	--	--	28,959	32,324
Langlade	145	--	16	--	4,081	1,332	2,142	176	--	7	17	117	--	--	14,865	15,371
Lincoln	145	--	1	--	900	723	890	16	--	1	--	6	--	--	7,932	9,895
Marinette	161	11	1	--	2,681	1,916	5,545	375	--	21	4	6	1	--	28,295	31,637
Menominee	303	--	--	--	2,919	313	666	1	--	--	--	46	--	--	6,636	12,016
Oconto	34	--	14	--	1,051	1,809	2,815	435	--	1	1	11	--	--	15,325	19,761
Oneida	110	--	10	--	1,385	717	1,083	63	--	1	2	13	--	--	12,340	19,682
Shawano	139	23	101	--	3,388	1,116	2,888	332	--	170	45	46	--	--	12,307	13,205
Vilas	205	--	2	--	2,018	924	1,245	1,620	--	--	--	20	--	--	13,015	19,856
Total	2,415	34	215	--	31,130	10,574	19,693	3,053	--	204	90	442	1	--	148,546	184,014
NORTHWEST UNIT																
Ashland	164	--	5	--	1,789	793	1,704	28	--	1	2	7	--	--	7,388	9,400
Barron	9	1	21	--	237	237	3,581	814	1	15	33	4	--	--	8,503	9,879
Bayfield	13	--	1	--	505	224	1,956	86	--	--	7	--	--	--	4,681	22,421
Burnett	--	1	4	--	152	93	1,618	627	--	--	2	1	--	--	4,921	9,934
Douglas	--	--	--	--	--	--	483	--	--	--	--	--	--	--	2,061	7,807
Iron	91	--	1	--	855	177	439	23	--	1	2	7	--	--	2,982	3,383
Polk	--	1	5	--	184	153	2,819	384	--	--	3	2	--	--	5,884	6,632
Price	403	--	7	--	2,623	1,143	1,792	115	--	1	2	11	--	--	13,329	16,639
Rusk	48	--	2	--	722	341	4,851	609	--	67	16	6	--	--	15,506	16,129
Sawyer	99	--	16	--	1,384	765	4,908	101	--	9	6	2	--	--	16,070	18,077
Taylor	82	--	15	--	1,149	724	1,161	112	--	3	1	4	--	--	8,253	8,576
Washburn	--	--	3	--	306	415	2,193	73	--	15	4	--	--	--	7,268	10,787
Total	910	3	80	--	9,907	5,065	27,505	2,973	1	112	78	44	--	--	96,847	139,665

(Table 13 continued on next page)

(Table 13 continued)

Unit and county	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Hack-berry	Butter-nut	Black cherry	Willow	Other hardwoods	Total hardwoods	All species
SOUTHEAST UNIT																
Brown	5	88	11	–	317	319	423	272	–	11	–	1	–	–	1,879	2,095
Calumet	1	25	32	–	227	590	252	206	–	11	–	4	–	–	1,564	1,608
Columbia	–	1	19	–	47	10	804	349	81	2	–	12	–	–	1,464	1,528
Dane	–	6	23	–	33	27	1,921	1,492	154	53	–	104	–	2	4,153	4,161
Dodge	–	–	105	–	264	68	485	607	–	67	–	–	–	–	1,860	1,875
Door	19	14	11	–	226	30	123	54	–	–	5	–	–	–	1,086	1,299
Fond Du Lac	–	–	2	–	1	57	109	150	2	12	–	1	–	–	395	396
Green	–	–	63	–	107	55	631	348	77	1	–	24	–	–	1,571	1,576
Green Lake	–	2	–	–	14	8	162	37	–	2	–	–	–	2	239	247
Jefferson	–	–	45	–	168	38	643	522	49	31	–	39	–	–	1,782	1,782
Kenosha	–	–	4	–	–	–	32	32	–	–	–	8	–	–	81	81
Kewaunee	–	11	11	–	184	83	180	49	–	–	5	5	–	–	892	1,126
Manitowoc	6	50	29	–	499	514	502	281	–	11	–	–	–	–	2,695	3,347
Milwaukee	–	–	–	–	–	–	3	–	1	–	–	–	–	–	6	6
Outagamie	6	16	26	–	430	928	766	117	–	27	17	57	–	2	2,976	3,067
Ozaukee	–	–	–	–	57	164	53	32	–	3	–	–	–	–	363	364
Racine	–	–	15	–	–	–	123	123	–	–	–	31	–	–	308	308
Rock	–	3	44	–	14	4	374	362	28	5	4	61	–	–	942	948
Sheboygan	5	23	–	–	374	402	477	247	–	13	–	–	–	–	2,106	2,147
Walworth	–	3	15	–	9	–	228	264	11	5	–	50	–	–	600	600
Washington	–	–	4	–	184	256	294	285	–	20	–	32	–	–	1,156	1,156
Waukesha	–	–	15	–	5	1	186	163	3	1	–	30	–	–	502	504
Winnebago	1	–	–	–	48	14	77	14	–	1	–	–	–	–	203	203
Total	45	241	475	–	3,206	3,568	8,847	6,006	406	277	33	459	–	5	28,824	30,425
SOUTHWEST UNIT																
Buffalo	5	302	226	23	119	492	9,859	2,415	1	241	7	86	–	76	15,598	15,600
Crawford	–	–	371	–	885	117	6,446	1,639	94	65	–	49	–	74	10,336	10,336
Dunn	9	84	175	14	1,170	707	5,006	1,274	–	40	19	76	–	99	10,819	12,122
Grant	–	13	272	–	649	77	3,006	1,156	256	31	1	20	–	–	5,945	5,961
Iowa	–	–	197	7	126	10	2,640	1,498	253	36	–	37	–	86	5,131	5,259
La Crosse	2	20	244	20	271	162	4,963	1,600	67	107	1	48	–	64	8,041	8,068
Lafayette	–	–	9	–	23	5	140	146	44	–	–	9	–	–	535	537
Pepin	–	110	27	8	256	176	2,308	576	–	40	1	8	–	–	4,001	4,008
Pierce	–	131	154	17	361	92	1,400	1,245	–	33	9	6	–	54	4,832	4,972
Richland	–	–	392	17	1,234	298	5,284	1,355	45	172	3	53	–	86	10,124	10,195
Sauk	2	–	245	15	678	558	6,771	2,119	39	155	3	75	–	133	11,854	12,013
St. Croix	–	17	17	11	331	36	1,025	316	–	5	2	4	–	–	2,232	3,004
Trempealeau	11	209	25	–	109	279	7,348	2,148	1	102	5	138	–	94	11,339	11,351
Vernon	–	28	379	23	2,072	130	8,154	3,096	22	244	3	71	–	147	15,724	16,179
Total	29	914	2,734	154	8,285	3,138	64,351	20,583	822	1,271	55	678	–	915	116,511	119,604
State total	3,952	1,259	3,883	154	63,170	30,421	166,953	43,526	1,234	2,204	373	1,788	1	920	493,606	588,479

1/ International 1/4-inch rule.

Table 14.--Saw-log receipts in Wisconsin by Forest Survey Unit, species group, and State of origin, 1992

(In thousand board feet) 1/

Species	ALL UNITS					
	Total	Iowa	Michigan	Minnesota	Ohio	Wisconsin
SOFTWOODS						
Redcedar	23	--	--	--	--	23
N. white-cedar	1,054	--	--	--	--	1,054
Balsam fir	174	--	55	--	--	119
Hemlock	4,057	--	461	--	--	3,595
Jack pine	4,890	--	1,421	--	--	3,470
Red pine	42,199	--	3,061	254	--	38,884
White pine	24,961	--	1,285	--	--	23,676
Spruce	394	--	100	--	--	295
Tamarack	42	--	16	--	--	26
Total	77,794	--	6,399	254	--	71,141
HARDWOODS						
Ash	13,895	24	192	177	--	13,501
Aspen	105,024	4	5,990	19	--	99,010
Balsam poplar	78	--	--	--	--	78
Basswood	37,702	72	2,632	975	--	34,023
Beech	1,727	--	140	--	--	1,587
White birch	25,839	1	3,019	5	--	22,813
Yellow birch	4,793	--	974	19	--	3,800
Cottonwood	1,225	1	8	211	--	1,004
Elm	2,629	78	14	221	--	2,317
Hard maple	71,990	143	9,757	357	--	61,733
Soft maple	32,679	9	2,608	410	--	29,652
Red oak	171,630	1,621	945	6,546	1,080	161,438
White oak	44,267	464	46	1,992	--	41,766
Walnut	1,120	54	--	14	--	1,052
Butternut	567	--	194	--	--	373
Black cherry	1,795	13	31	46	--	1,704
Willow	1	--	--	--	--	1
Hackberry	2,319	10	--	105	--	2,204
Other hardwoods	2	--	--	--	--	2
Total	519,280	2,494	26,552	11,098	1,080	478,057
All species	597,075	2,494	32,951	11,352	1,080	549,198

(Table 14 continued on next page)

(Table 14 continued)

Species	CENTRAL UNIT					
	Total	Iowa	Michigan	Minnesota	Ohio	Wisconsin
SOFTWOODS						
N. white-cedar	64	--	--	--	--	64
Hemlock	871	--	216	--	--	655
Jack pine	354	--	--	--	--	354
Red pine	1,496	--	--	--	--	1,496
White pine	5,466	--	--	--	--	5,466
Total	8,251	--	216	--	--	8,035
HARDWOODS						
Ash	2,895	--	--	--	--	2,895
Aspen	16,250	--	--	--	--	16,250
Basswood	5,437	--	--	247	--	5,190
Beech	22	--	--	--	--	22
White birch	646	--	--	--	--	646
Yellow birch	564	--	--	--	--	564
Elm	181	--	--	1	--	180
Hard maple	7,151	--	--	--	--	7,151
Soft maple	7,319	--	--	113	--	7,206
Red oak	41,270	432	--	419	1,080	39,339
White oak	8,829	--	--	23	--	8,806
Walnut	84	--	--	5	--	79
Hackberry	403	--	--	--	--	403
Black cherry	113	--	--	--	--	113
Butternut	46	--	--	--	--	46
Total	91,209	432	--	808	1,080	88,889
All species	99,460	432	216	808	1,080	96,924

(Table 14 continued on next page)

(Table 14 continued)

Species	Total	Iowa	Michigan	Minnesota	Ohio	Wisconsin
			NORTHEAST UNIT			
SOFTWOODS						
N. white-cedar	496	--	--	--	--	496
Balsam fir	122	--	55	--	--	67
Hemlock	3,033	--	245	--	--	2,788
Jack pine	3,577	--	1,421	--	--	2,157
Red pine	13,257	--	1,270	--	--	11,987
White pine	11,583	--	1,282	--	--	10,301
Spruce	370	--	100	--	--	270
Tamarack	27	--	16	--	--	11
Total	32,464	--	4,388	--	--	28,076
HARDWOODS						
Ash	5,103	--	165	2	--	4,936
Aspen	54,871	--	5,976	--	--	48,895
Balsam poplar	60	--	--	--	--	60
Basswood	12,443	--	2,125	127	--	10,191
Beech	1,373	--	140	--	--	1,233
White birch	20,922	--	2,996	--	--	17,926
Yellow birch	3,308	--	937	--	--	2,371
Cottonwood	33	--	--	--	--	33
Elm	339	--	11	--	--	328
Hard maple	44,786	--	8,872	--	--	35,914
Soft maple	16,469	--	2,537	--	--	13,932
Red oak	25,131	--	354	--	--	24,777
White oak	4,633	--	22	--	--	4,611
Butternut	352	--	194	--	--	158
Hackberry	334	--	--	--	--	334
Black cherry	541	--	29	--	--	513
Willow	1	--	--	--	--	1
Total	190,699	--	24,359	130	--	166,210
All species	223,163	--	28,747	130	--	194,287

(Table 14 continued on next page)

(Table 14 continued)

Species	NORTHWEST UNIT					
	Total	Iowa	Michigan	Minnesota	Ohio	Wisconsin
SOFTWOODS						
Cedar	19	--	--	--	--	19
Balsam fir	52	--	--	--	--	52
Hemlock	9	--	--	--	--	9
Jack pine	937	--	--	--	--	937
Red pine	5,081	--	1,792	254	--	3,036
White pine	2,211	--	3	--	--	2,208
Spruce	13	--	--	--	--	13
Tamarack	4	--	--	--	--	4
Total	8,326	--	1,795	254	--	6,278
HARDWOODS						
Ash	2,067	--	24	--	--	2,044
Aspen	25,161	--	10	--	--	25,151
Basswood	11,121	--	486	70	--	10,564
White birch	3,373	--	23	--	--	3,350
Yellow birch	825	--	37	--	--	788
Cottonwood	4	--	--	--	--	4
Elm	61	--	--	--	--	61
Hard maple	7,019	--	867	76	--	6,076
Soft maple	2,281	--	71	22	--	2,188
Red oak	20,829	--	536	324	--	19,969
White oak	2,486	--	1	76	--	2,409
Walnut	1	--	--	--	--	1
Other hardwoods	209	--	2	--	--	206
Total	75,437	--	2,056	567	--	72,813
All species	83,763	--	3,851	821	--	79,091

(Table 14 continued on next page)

(Table 14 continued)

Species	SOUTHEAST UNIT Total	Iowa	Michigan	Minnesota	Ohio	Wisconsin
SOFTWOODS						
Cedar	476	--	--	--	--	476
Hemlock	143	--	--	--	--	143
Jack pine	22	--	--	--	--	22
Red pine	20,648	--	--	--	--	20,648
White pine	3,450	--	--	--	--	3,450
Spruce	12	--	--	--	--	12
Tamarack	11	--	--	--	--	11
Total	24,761	--	--	--	--	24,761
HARDWOODS						
Ash	1,783	--	--	--	--	1,783
Aspen	4,559	--	--	--	--	4,559
Balsam poplar	18	--	--	--	--	18
Basswood	2,270	--	--	--	--	2,270
Beech	332	--	--	--	--	332
White birch	734	--	--	--	--	734
Yellow birch	47	--	--	--	--	47
Cottonwood	246	1	--	--	--	245
Elm	508	--	--	--	--	508
Hard maple	4,690	--	--	--	--	4,690
Soft maple	3,516	--	--	--	--	3,516
Red oak	12,655	6	--	--	--	12,650
White oak	6,008	6	--	--	--	6,003
Walnut	234	3	--	--	--	232
Butternut	29	--	--	--	--	29
Black cherry	332	1	--	--	--	331
Hackberry	329	1	--	--	--	328
Other hardwoods	2	--	--	--	--	2
Total	38,295	18	--	--	--	38,277
All species	63,056	18	--	--	--	63,038

(Table 14 continued on next page)

(Table 14 continued)

Species	SOUTHWEST UNIT					
	Total	Iowa	Michigan	Minnesota	Ohio	Wisconsin
SOFTWOODS						
Redcedar	23	--	--	--	--	23
Red pine	1,718	--	--	--	--	1,718
White pine	2,251	--	--	--	--	2,251
Total	3,992	--	--	--	--	3,992
HARDWOODS						
Ash	2,046	24	4	175	--	1,843
Aspen	4,183	4	5	19	--	4,155
Basswood	6,431	72	21	531	--	5,808
White birch	163	1	--	5	--	157
Yellow birch	49	--	--	19	--	30
Cottonwood	941	--	8	211	--	723
Elm	1,540	78	3	220	--	1,239
Hard maple	8,344	143	17	281	--	7,902
Soft maple	3,094	9	--	276	--	2,810
Red oak	71,745	1,184	55	5,803	--	64,704
White oak	22,310	458	23	1,893	--	19,937
Walnut	800	51	--	9	--	740
Butternut	57	--	--	--	--	57
Hackberry	1,147	9	--	105	--	1,034
Black cherry	788	12	1	46	--	729
Total	123,640	2,044	137	9,593	--	111,866
All species	127,632	2,044	137	9,593	--	115,858

1/ International 1/4-inch rule.

Table 15.--Veneer-log production and receipts in Wisconsin for selected years, 1946-1992

(In thousand board feet) 1/

Year	Production	Receipts
1946	29,267	68,116
1948	32,026	71,791
1950	26,652	62,935
1952	29,956	59,500
1954	27,109	59,573
1956	30,403	66,949
1958	23,740	43,063
1960	25,467	51,298
1963	21,919	37,517
1965	25,203	41,918
1966	23,782	43,104
1968	22,867	42,162
1969	21,037	37,571
1970	15,814	29,896
1972	19,465	36,491
1974	32,224	37,804
1975	37,342	41,605
1976	31,692	33,294
1977	31,685	36,971
1978	20,863	27,903
1980	27,250	34,540
1984	22,989	33,403
1986	26,203	37,607
1988	42,678	42,618
1990	44,227	44,177
1992	52,210	49,206

1/ International 1/4-inch rule.

Table 16.--Veneer-log production and receipts by species group in Wisconsin, 1988 and 1992

(In thousand board feet) 1/

Species group	Production			Receipts		
	1990	1992	Change	1990	1992	Change
SOFTWOODS						
Cedar	--	8	8	--	8	8
Balsam fir	--	--	--	--	--	--
Hemlock	--	341	341	--	--	--
Jack pine	--	88	88	--	--	--
Red pine	893	546	-347	--	78	78
White pine	1,919	982	-937	198	378	180
Spruce	4,150	323	-3,827	--	--	--
Tamarack	423	28	-395	--	--	--
Total	7,385	2,316	-5,069	198	464	266
HARDWOODS						
Ash	89	356	267	239	556	317
Aspen	11,211	16,259	5,048	2,427	2,989	562
Balsam poplar	--	7	7	19	24	5
Basswood	3,515	3,282	-233	5,341	5,432	91
Beech	4	464	460	282	0	-282
White birch	281	5,198	4,917	375	5,707	5,332
Yellow birch	285	713	428	834	1,606	772
Cottonwood	279	364	85	477	782	305
Elm	1	--	-1	1	0	-1
Hickory	29	--	-29	33	0	-33
Hard maple	4,105	5,719	1,614	12,559	11,419	-1,140
Soft maple	374	755	381	1,218	1,390	172
Red oak	14,271	13,160	-1,111	16,907	15,910	-997
White oak	2,361	3,304	943	3,015	2,749	-266
Walnut	19	246	227	5	3	-2
Other hardwoo	18	67	49	247	175	-72
Total	36,842	49,894	13,052	43,979	48,742	4,763
All species	44,227	52,210	7,983	44,177	49,206	5,029

1/ International 1/4-inch rule.

Table 17.--Veneer-log and bolt production in Wisconsin by species and State or country of destination, 1992

(In thousand board feet) 1/

Species	Total	Destination						
		Wisconsin	Michigan	Indiana	Ohio	Illinois	Canada	Other foreign
SOFTWOODS								
N. white-cedar	8	8	--	--	--	--	--	--
Hemlock	341	--	341	--	--	--	--	--
Jack pine	88	--	84	--	3	--	--	--
Red pine	546	78	467	--	1	--	--	--
White pine	982	204	777	--	1	--	--	--
Spruce	323	--	323	--	--	--	--	--
Tamarack	28	--	28	--	--	--	--	--
Total	2,317	290	2,022	--	5	--	--	--
HARDWOODS								
Ash	356	333	--	23	--	--	--	--
Aspen	16,259	2,736	13,523	--	--	--	--	--
Balsam poplar	7	7	--	--	--	--	--	--
Basswood	3,282	3,282	--	--	--	--	--	--
Beech	464	--	464	--	--	--	--	--
White birch	5,198	5,184	14	--	--	--	--	--
Yellow birch	713	657	56	--	--	--	--	--
Cottonwood	364	364	--	--	--	--	--	--
Hard maple	5,719	5,021	618	80	--	--	--	--
Soft maple	754	586	168	--	--	--	--	--
Red oak	13,160	13,027	5	68	--	--	59	--
White oak	3,304	2,378	--	71	--	855	--	--
Walnut	246	3	--	63	--	171	--	9
Black cherry	67	47	--	21	--	--	--	--
Total	49,893	33,625	14,848	325	--	1,026	59	9
All species	52,210	33,916	16,870	325	5	1,026	59	9

1/ International 1/4-inch rule.

Table 18.--Veneer-log and bolt receipts in Wisconsin by area of origin for selected years, 1946-1992

(In thousand board feet) 1/

Year	All areas	Area of origin				
		Wisconsin	Michigan	Minnesota	Other States	2/ Canada
1946	68,116	28,813	33,834	1,139	919	3,411
1948	71,791	31,553	27,052	4,811	1,066	7,309 3/
1950	62,935	26,198	19,917	4,919	924	10,977 3/
1952	59,500	28,899	15,775	5,826	1,516	7,484
1954	59,573	26,527	15,537	7,962	3,286	6,261
1956	66,949	30,298	18,932	7,221	3,405	7,093
1958	43,063	23,488	8,078	7,027	916	3,554
1960	51,298	24,249	8,659	8,380	5,207	4,803
1963	37,517	18,846	4,950	6,177	2,777	4,767
1965	41,918	23,788	5,918	6,148	1,726	4,338
1966	43,104	22,547	8,044	6,111	1,621	4,781
1968	42,162	20,458	8,265	5,207	2,642	5,590
1969	37,571	18,853	8,001	3,518	2,679	4,520
1970	29,896	15,148	7,347	2,951	1,747	2,703
1972	36,491	18,172	10,893	3,457	1,552	2,417
1974	37,804	19,643	10,922	4,083	1,950	1,206
1975	41,605	24,294	10,221	3,486	1,905	1,699
1976	33,294	20,379	9,009	2,136	1,567	203
1977	36,971	20,752	10,280	3,033	2,412	494
1978	27,903	14,299	9,029	2,468	1,587	520
1980	34,540	14,245	14,058	2,501	3,008	728
1984	33,403	20,575	9,385	2,079	1,225	139
1986	37,607	23,098	13,036	758	627	88
1988	42,618	26,030	12,550	2,929	1,092	17
1990	44,177	26,972	14,368	1,712	642	483
1992	49,207	33,916	12,049	2,204	787	251

1/ International 1/4-inch rule.

2/ Includes only logs and bolts shipped to Canadian mills for processing.

3/ Includes nominal quantities from other countries.

Table 19.--Veneer-log and bolt receipts in Wisconsin by species group and area of origin, 1992

(In thousand board feet) 1/

Species group	Total	Wisconsin	Michigan	Minnesota	Iowa	Missouri	Ohio	Indiana	Illinois	Canada	Other States
SOFTWOODS											
N. white-cedar	8	8	--	--	--	--	--	--	--	--	--
Red pine	78	78	--	--	--	--	--	--	--	--	--
White pine	378	204	165	--	--	8	--	--	--	--	--
Total	464	290	165	--	--	8	--	--	--	--	--
HARDWOODS											
Ash	556	333	126	73	11	13	--	--	--	--	--
Aspen	2,989	2,736	201	52	--	1	--	--	--	--	--
Balsam poplar	24	7	17	--	--	--	--	--	--	--	--
Basswood	5,432	3,282	1,108	1,041	1	1	--	--	--	--	--
White birch	5,707	5,184	502	13	--	7	--	--	--	--	--
Yellow birch	1,606	657	904	40	--	5	--	--	--	--	--
Cottonwood	782	364	--	419	--	--	--	--	--	--	--
Hard maple	11,419	5,021	6,340	57	--	1	--	--	--	--	--
Soft maple	1,390	586	799	--	--	4	--	--	--	--	--
Red oak	15,910	13,027	1,858	364	248	55	22	17	25	251	42
White oak	2,749	2,378	6	145	9	81	--	--	--	--	129
Walnut	3	3	--	--	--	--	--	--	--	--	--
Black cherry	175	47	23	--	1	--	--	--	--	--	104
Total	48,742	33,625	11,883	2,204	271	169	22	17	25	251	275
All species	49,206	33,916	12,049	2,204	271	177	22	17	25	251	275

1/ International 1/4-inch rule.

Table 20.--Gro[illegible] removals from timberland for industrial roundwood by Forest Survey Unit, county, and species group, Wisconsin, 1992

(In thousand cubic feet)

Unit and county	Red-cedar	N. white-cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Total softwoods	Ash	Aspen	Balsam poplar	Basswood	Beech	White birch	Yellow birch
CENTRAL UNIT																	
Adams	--	--	--	--	2,481	1,968	324	2	--	4,774	24	167	--	15	--	42	2
Chippewa	--	--	3	6	56	443	82	10	1	601	184	3,578	1	246	--	378	9
Clark	--	--	--	1	206	310	141	--	5	662	208	4,128	1	197	1	538	32
Eau Claire	--	--	--	1	686	601	35	3	--	1,325	32	898	--	16	--	110	7
Jackson	--	--	1	--	2,105	647	257	6	3	3,019	44	1,464	--	38	--	179	7
Juneau	--	--	--	--	1,255	645	129	2	--	2,030	30	342	--	28	--	40	1
Marathon	--	--	17	87	149	464	336	65	--	1,118	380	2,931	2	539	4	253	125
Marquette	--	--	1	--	66	706	177	2	--	952	12	24	--	12	--	6	1
Monroe	--	--	--	--	519	496	138	6	--	1,160	40	178	--	37	--	42	1
Portage	--	--	1	26	325	803	270	8	2	1,435	30	534	1	47	--	57	6
Waupaca	--	9	4	42	45	740	145	8	--	992	107	608	--	113	13	22	15
Waushara	--	--	--	--	104	1,670	390	3	--	2,167	8	124	--	22	--	10	1
Wood	--	--	--	3	284	465	220	4	1	977	43	1,141	--	26	--	92	4
Total	--	9	26	166	8,280	9,956	2,645	118	12	21,212	1,142	16,117	5	1,337	19	1,769	211
NORTHEAST UNIT																	
Florence	--	--	204	303	48	278	43	196	--	1,073	72	3,446	39	202	33	1,151	135
Forest	--	21	461	180	65	819	93	343	28	2,010	319	4,485	37	537	26	1,973	243
Langlade	--	9	260	71	233	291	50	83	22	1,020	289	4,644	22	652	15	1,177	99
Lincoln	--	--	153	44	189	624	145	72	21	1,247	268	5,036	19	409	2	898	50
Marinette	--	136	325	76	1,484	1,616	112	160	39	3,948	185	7,953	33	287	120	1,438	71
Menominee	--	3	15	1,232	172	282	911	4	2	2,620	141	2,693	15	314	148	185	104
Oconto	--	26	40	9	416	1,696	80	8	1	2,275	90	3,901	30	61	57	754	25
Oneida	--	10	348	70	701	1,584	641	308	34	3,696	366	5,907	24	548	8	2,098	54
Shawano	--	70	4	87	18	304	82	16	2	582	164	1,620	12	174	102	141	43
Vilas	--	3	310	23	783	1,117	585	171	14	3,007	201	6,503	48	244	23	3,185	86
Total	--	277	2,119	2,094	4,109	8,610	2,743	1,361	164	21,477	2,096	46,186	279	3,428	533	13,001	910
NORTHWEST UNIT																	
Ashland	--	3	388	50	612	332	223	364	19	1,992	207	2,728	1	244	1	895	75
Barron	--	--	1	2	174	340	129	22	--	668	46	2,488	--	78	--	174	5
Bayfield	--	--	171	11	3,404	2,762	451	160	10	6,970	146	8,089	1	105	--	1,913	29
Burnett	--	--	6	--	2,112	1,143	105	2	--	3,367	17	2,596	--	29	--	154	3
Douglas	--	--	502	2	2,716	1,334	77	66	--	4,697	52	4,434	--	52	--	898	2
Iron	--	16	526	165	269	200	75	407	22	1,680	203	5,358	5	259	24	705	61
Polk	--	--	1	--	147	183	14	1	--	347	17	1,425	--	58	--	39	1
Price	--	2	361	78	130	804	184	251	51	1,861	334	5,115	8	574	2	1,359	102
Rusk	--	--	19	21	57	177	80	55	26	436	329	4,254	2	626	1	1,091	55
Sawyer	--	--	167	29	212	421	255	133	35	1,253	403	5,655	3	737	1	1,934	115
Taylor	--	--	171	72	17	38	54	49	10	412	204	4,087	2	452	6	528	57
Washburn	--	--	23	1	1,211	906	46	22	--	2,209	124	5,225	--	28	1	718	8
Total	--	22	2,336	431	11,063	8,642	1,694	1,532	173	25,894	2,080	51,455	23	3,241	35	10,407	514

(Table 20 continued on next page)

(Table 20 continued)

Unit and county	Red-cedar	N. white-cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tama-rack	Total softwoods	Ash	Aspen	Balsam poplar	Bass-wood	Beech	White birch	Yellow birch
SOUTHEAST UNIT																	
Brown	--	18	--	5	1	11	19	--	--	54	13	305	20	27	25	5	2
Calumet	--	5	--	--	--	--	3	1	--	9	10	3	--	21	5	--	0
Columbia	--	--	--	--	25	363	62	6	--	456	7	71	--	22	--	2	0
Dane	--	--	--	--	1	19	7	1	--	29	7	51	--	54	--	3	--
Dodge	--	1	--	--	2	2	2	--	--	7	18	2	--	31	--	--	--
Door	--	21	--	3	--	6	13	--	--	44	12	68	--	4	12	17	3
Fond Du Lac	--	--	--	--	--	21	1	--	--	22	10	--	--	1	--	--	--
Green	--	--	--	--	14	23	6	--	--	43	4	--	--	42	--	--	--
Green Lake	--	--	--	--	2	71	13	--	--	86	--	8	--	--	--	1	--
Jefferson	--	--	--	--	20	115	13	--	--	148	5	1	--	42	--	--	--
Kenosha	--	--	1	--	1	--	--	--	--	2	1	1	--	--	--	--	--
Kewaunee	--	27	--	9	--	7	4	--	2	49	28	11	3	9	8	8	--
Manitowoc	--	32	--	9	5	6	74	2	--	127	43	11	--	51	39	6	3
Milwaukee	--	--	--	--	--	1	1	--	--	1	--	--	--	--	--	--	--
Outagamie	--	6	--	--	1	10	12	--	--	28	53	138	--	44	11	19	4
Ozaukee	--	--	1	--	--	1	3	--	--	5	3	--	--	7	--	--	--
Racine	--	--	--	--	--	--	--	--	--	--	3	--	--	--	--	--	--
Rock	--	--	--	--	2	131	10	3	--	145	7	--	--	1	--	--	--
Sheboygan	--	1	--	--	--	17	5	--	--	23	51	4	--	34	13	--	1
Walworth	--	--	--	--	2	1	1	--	--	4	3	--	--	--	--	--	--
Washington	--	--	--	--	--	3	1	1	--	5	9	6	--	5	--	--	--
Waukesha	--	--	--	--	1	125	55	28	--	210	7	1	--	10	--	--	--
Winnebago	--	--	--	--	--	13	--	--	--	13	7	2	--	--	3	2	1
Total	--	111	1	26	76	946	305	42	2	1,511	301	680	24	407	117	63	15
SOUTHWEST UNIT																	
Buffalo	--	--	--	--	8	153	19	6	--	186	23	444	--	112	--	12	1
Crawford	--	--	--	--	--	1	--	--	--	1	21	14	--	69	--	--	--
Dunn	--	--	2	--	206	1,016	138	5	1	1,369	69	897	--	143	--	49	3
Grant	--	--	--	--	1	10	3	--	--	13	20	5	--	57	--	--	--
Iowa	--	--	--	--	9	141	46	--	--	196	12	4	--	27	--	--	--
La Crosse	--	--	--	--	73	71	17	7	--	168	19	27	--	34	--	15	1
Lafayette	--	--	--	--	1	--	2	--	--	2	4	--	--	24	--	--	--
Pepin	--	--	2	--	5	53	6	1	--	67	6	102	--	26	--	3	--
Pierce	--	--	--	--	5	29	3	2	--	39	57	53	--	145	--	2	--
Richland	--	--	--	--	2	18	20	--	--	40	63	37	--	109	--	--	--
Sauk	2	--	1	--	58	643	121	13	--	839	42	62	--	88	--	6	1
St. Croix	3	--	1	--	15	187	56	6	--	268	5	1,045	--	31	--	10	--
Trempealeau	--	--	--	--	23	598	67	10	--	698	13	696	--	65	--	99	2
Vernon	--	--	--	--	--	56	41	--	--	97	58	42	--	138	--	1	--
Total	5	--	6	--	406	2,976	539	50	1	3,984	411	3,428	--	1,070	--	197	8
State total	5	420	4,488	2,717	23,933	31,131	7,925	3,104	353	74,077	6,031	117,867	330	9,483	704	25,437	1,657

(Table 20 continued on next page)

(Table 20 continued)

Unit and county	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Black cherry	Other hardwoods	Hack-berry	Butter-nut	Total hardwoods	All species
CENTRAL UNIT														
Adams	3	2	–	42	36	411	70	–	5	–	2	–	822	5,596
Chippewa	7	14	–	341	444	1,329	235	–	31	–	3	1	6,802	7,403
Clark	1	41	–	525	770	1,100	279	–	15	–	1	2	7,837	8,500
Eau Claire	–	14	–	98	119	332	80	–	5	–	–	–	1,712	3,038
Jackson	–	9	–	110	305	1,169	310	–	8	–	5	2	3,651	6,670
Juneau	–	11	–	92	119	809	199	–	7	–	7	1	1,688	3,718
Marathon	2	159	–	1,332	583	1,354	184	2	16	–	13	5	7,885	9,003
Marquette	1	2	–	24	27	427	69	–	1	–	2	–	608	1,560
Monroe	–	12	–	69	108	1,316	370	–	10	–	17	1	2,201	3,361
Portage	1	5	–	125	109	341	85	1	3	–	–	1	1,346	2,781
Waupaca	1	13	–	493	366	782	116	2	8	–	8	6	2,676	3,668
Waushara	2	1	–	53	34	381	142	–	1	–	4	–	783	2,950
Wood	1	6	–	88	215	550	107	–	2	–	–	1	2,277	3,253
Total	18	287	–	3,393	3,238	10,301	2,247	6	113	–	63	20	40,288	61,500
NORTHEAST UNIT														
Florence	1	16	–	1,143	445	197	16	–	26	–	–	1	6,922	7,994
Forest	2	194	–	2,748	1,128	634	93	–	47	–	1	3	12,470	14,480
Langlade	4	136	–	1,567	895	607	97	2	42	–	1	3	10,252	11,272
Lincoln	8	77	–	598	475	552	29	–	52	–	–	–	8,472	9,719
Marinette	3	9	–	1,347	938	1,242	87	–	40	–	4	1	13,758	17,705
Menominee	–	39	–	896	506	844	61	–	23	–	–	–	5,969	8,589
Oconto	–	9	–	546	576	620	91	–	16	–	–	–	6,777	9,052
Oneida	13	22	–	1,081	739	900	74	–	94	–	–	–	11,929	15,625
Shawano	4	25	–	803	356	644	72	5	10	–	30	8	4,212	4,794
Vilas	5	46	–	1,047	729	420	345	–	31	–	–	–	12,913	15,919
Total	40	574	–	11,776	6,786	6,660	964	7	381	–	36	16	93,673	115,150
NORTHWEST UNIT														
Ashland	1	27	–	837	592	525	87	–	15	–	–	–	6,233	8,226
Barron	–	6	–	99	115	768	160	–	6	–	3	6	3,953	4,622
Bayfield	1	11	–	380	446	592	51	–	13	–	–	1	11,777	18,747
Burnett	–	1	–	69	85	338	126	–	6	–	–	–	3,425	6,792
Douglas	–	–	–	53	270	104	4	–	1	–	–	–	5,869	10,566
Iron	3	62	–	892	618	359	52	–	47	–	–	–	8,648	10,328
Polk	–	1	–	95	48	616	74	–	2	–	–	1	2,378	2,725
Price	8	62	–	932	649	774	58	–	50	–	–	–	10,027	11,888
Rusk	2	30	–	852	712	1,373	177	–	55	–	12	3	9,573	10,010
Sawyer	3	83	–	962	817	1,274	147	–	28	–	2	1	12,164	13,417
Taylor	2	190	–	570	566	339	40	–	15	–	1	–	7,061	7,473
Washburn	–	18	–	192	307	533	23	–	6	–	3	1	7,185	9,394
Total	21	491	–	5,933	5,224	7,594	1,000	–	244	–	20	14	88,294	114,188

(Table 20 continued on next page)

(Table 20 continued)

Unit and county	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Black cherry	Other hardwoods	Hack-berry	Butter-nut	Total hardwoods	All species
SOUTHEAST UNIT														
Brown	15	2	--	71	64	91	52	--	--	--	2	--	695	749
Calumet	4	6	--	41	103	49	39	--	1	--	2	--	284	293
Columbia	0	3	--	10	4	168	95	14	2	--	--	--	399	855
Dane	1	4	--	8	7	418	282	29	18	--	9	--	893	922
Dodge	--	18	--	46	12	94	135	--	--	--	12	--	368	375
Door	5	2	--	40	6	23	10	--	--	--	--	1	204	248
Fond Du Lac	--	--	--	3	11	27	28	--	--	--	2	--	84	106
Green	--	11	--	19	10	119	66	15	4	--	--	--	291	334
Green Lake	--	--	--	3	2	41	8	--	--	--	--	--	64	151
Jefferson	--	8	--	29	7	121	98	9	7	--	5	--	332	480
Kenosha	--	1	--	--	--	6	6	--	1	--	--	--	16	18
Kewaunee	4	2	--	35	15	35	9	--	1	--	--	1	169	218
Manitowoc	9	5	--	107	100	103	53	--	--	--	2	--	531	658
Milwaukee	--	--	--	--	--	1	--	--	--	--	--	--	1	3
Outagamie	3	5	--	98	184	152	24	--	10	1	5	3	752	780
Ozaukee	--	--	--	10	29	10	6	--	--	--	1	--	64	69
Racine	--	3	--	--	--	23	23	--	5	--	--	--	57	57
Rock	--	8	--	2	1	71	68	5	11	--	1	1	175	320
Sheboygan	4	--	--	75	72	105	47	--	--	--	2	--	409	432
Walworth	--	3	--	1	--	43	50	2	9	--	1	--	112	115
Washington	--	1	--	32	45	55	54	--	6	--	3	--	215	220
Waukesha	--	3	--	1	--	35	31	1	5	--	--	--	92	303
Winnebago	--	--	--	12	5	23	3	--	--	--	--	--	58	71
Total	47	83	--	643	675	1,812	1,188	74	80	1	48	6	6,264	7,775
SOUTHWEST UNIT														
Buffalo	74	39	4	24	94	1,875	469	--	15	13	42	1	3,244	3,429
Crawford	--	65	--	154	20	1,249	366	21	9	13	11	--	2,012	2,013
Dunn	15	31	2	237	148	1,040	273	--	18	17	7	3	2,953	4,322
Grant	2	47	--	116	13	571	257	49	4	--	5	--	1,148	1,161
Iowa	--	34	1	22	2	498	313	50	6	15	6	--	990	1,186
La Crosse	3	43	3	53	34	1,167	312	14	8	11	19	--	1,764	1,932
Lafayette	--	2	--	4	1	26	41	10	2	--	--	--	113	115
Pepin	33	5	1	44	31	438	109	--	1	--	7	--	806	874
Pierce	45	27	3	63	22	272	236	--	1	9	6	2	942	980
Richland	--	68	3	215	53	1,007	312	12	9	15	30	1	1,934	1,974
Sauk	--	43	3	128	112	1,286	483	8	13	23	27	1	2,324	3,163
St. Croix	3	3	2	70	7	195	60	--	1	--	1	--	1,433	1,701
Trempealeau	36	5	--	26	83	1,398	416	--	26	16	18	1	2,902	3,600
Vernon	5	66	4	359	23	1,557	704	6	13	26	43	1	3,046	3,142
Total	216	478	27	1,516	643	12,579	4,350	169	126	159	221	10	25,609	29,593
State total	342	1,913	27	23,260	16,567	38,947	9,749	258	944	160	388	65	254,128	328,206

Table 21.--Sawtimber removals from timberland for industrial roundwood production by Forest Survey Unit, county, and species group, Wisconsin, 1992

(In thousand board feet) 1/

Unit and county	Red-cedar	N. white-cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tama-rack	Total softwoods	Ash	Aspen	Balsam poplar	Bass-wood	Beech	White birch	Yellow birch
CENTRAL UNIT																	
Adams	--	--	--	--	3,040	4,016	825	3	--	7,883	71	446	--	52	--	25	6
Chippewa	--	--	5	11	68	1,768	423	16	1	2,293	574	9,987	2	977	1	206	19
Clark	--	--	--	3	325	827	660	--	8	1,823	541	10,360	1	764	1	395	65
Eau Claire	--	--	--	2	841	1,210	115	4	--	2,172	56	2,215	--	41	--	72	11
Jackson	--	--	1	--	2,645	1,571	1,042	10	5	5,274	113	3,830	--	147	--	127	13
Juneau	--	--	--	--	1,539	1,536	475	3	--	3,553	102	1,497	--	118	--	30	2
Marathon	--	1	26	194	187	1,258	1,688	103	--	3,457	1,475	8,035	3	2,402	10	457	475
Marquette	--	--	1	--	82	1,405	521	3	--	2,011	48	115	--	57	--	7	1
Monroe	--	--	1	--	638	1,049	566	10	--	2,264	154	744	1	171	--	33	1
Portage	--	--	1	81	434	1,763	1,094	13	3	3,390	79	1,439	1	143	--	57	11
Waupaca	--	36	6	110	56	1,444	548	12	--	2,211	453	1,623	--	539	63	20	47
Waushara	--	--	--	--	129	3,328	1,197	4	--	4,658	26	343	--	103	--	11	3
Wood	--	--	--	6	384	983	868	6	2	2,249	113	2,875	--	102	--	74	8
Total	--	37	42	406	10,367	22,158	10,022	186	19	43,237	3,804	43,509	9	5,618	75	1,514	663
NORTHEAST UNIT																	
Florence	--	1	326	864	96	959	197	316	--	2,759	186	8,727	65	795	59	2,704	627
Forest	--	86	747	605	85	3,049	453	559	44	5,629	742	14,214	60	2,250	47	4,608	919
Langlade	--	38	410	139	296	735	193	132	35	1,979	734	12,267	35	2,696	30	1,801	244
Lincoln	--	--	248	92	258	1,970	679	125	34	3,405	676	12,956	31	1,121	4	1,079	162
Marinette	--	284	530	380	1,891	4,810	354	254	63	8,566	688	25,047	89	1,166	425	2,686	279
Menominee	--	8	23	3,507	213	709	3,796	7	3	8,266	408	6,033	24	1,630	689	92	365
Oconto	--	58	64	17	527	6,136	335	12	2	7,151	332	12,160	49	219	216	1,403	64
Oneida	--	40	552	215	1,151	6,041	2,692	533	54	11,278	710	16,825	37	1,079	14	2,627	149
Shawano	--	273	6	237	27	776	424	27	3	1,773	686	4,543	19	813	511	220	163
Vilas	--	13	493	55	1,680	4,513	2,599	331	27	9,711	477	17,741	69	503	37	3,738	264
Total	--	802	3,399	6,113	6,224	29,699	11,722	2,295	265	60,518	5,640	130,513	478	12,273	2,032	20,956	3,236
NORTHWEST UNIT																	
Ashland	--	12	616	142	907	1,283	965	663	34	4,622	422	7,732	1	1,037	1	1,343	232
Barron	--	--	1	4	214	1,069	670	35	1	1,994	145	7,621	--	351	--	154	13
Bayfield	--	1	285	44	5,996	13,348	2,360	366	31	22,432	259	20,672	1	230	--	1,638	56
Burnett	--	--	9	--	3,971	3,599	574	3	--	8,156	37	7,333	--	134	--	158	5
Douglas	--	1	794	3	4,872	4,481	399	104	--	10,654	54	10,366	--	47	--	605	3
Iron	--	30	830	365	390	500	249	693	35	3,093	382	12,840	7	790	39	511	154
Polk	--	--	1	--	198	757	80	2	--	1,038	57	4,962	--	279	--	23	2
Price	--	8	577	181	189	3,096	863	445	82	5,441	957	13,829	13	1,864	3	1,926	391
Rusk	--	--	30	40	70	476	406	89	42	1,153	810	13,147	4	2,551	1	690	115
Sawyer	--	--	264	88	347	1,454	1,162	232	56	3,603	980	17,143	5	3,317	2	2,514	262
Taylor	--	--	274	142	21	75	297	77	15	902	557	10,002	4	1,835	11	802	139
Washburn	--	2	36	2	2,306	3,022	196	39	--	5,603	223	15,380	--	110	3	1,110	14
Total	--	54	3,718	1,012	19,481	33,160	8,221	2,746	296	68,690	4,881	141,027	35	12,544	59	11,474	1,386

(Table 21 continued on next page)

(Table 21 continued)

Unit and county	Red-cedar	N. white-cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tama-rack	Total softwoods	Ash	Aspen	Balsam poplar	Bass-wood	Beech	White birch	Yellow birch
SOUTHEAST UNIT																	
Brown	--	72	--	29	1	22	103	--	--	227	60	721	33	129	127	23	9
Calumet	--	20	--	--	--	--	18	3	--	41	50	12	--	103	23	--	2
Columbia	--	--	--	--	31	708	159	9	--	907	32	322	--	113	--	1	--
Dane	--	1	--	--	2	35	18	2	--	59	31	244	--	266	--	2	--
Dodge	--	3	--	--	2	5	10	--	--	21	89	10	--	155	--	--	--
Door	--	86	--	18	2	25	73	--	--	204	58	313	--	18	60	82	16
Fond Du Lac	--	--	--	--	--	39	2	1	--	43	48	1	--	5	--	--	--
Green	--	--	--	--	17	43	16	--	--	76	21	--	--	201	--	--	--
Green Lake	--	1	--	--	3	138	26	--	--	168	--	36	--	--	--	--	--
Jefferson	--	--	--	--	24	220	25	--	--	269	23	4	--	207	--	--	--
Kenosha	--	--	1	--	1	--	--	--	--	2	4	2	--	--	--	--	--
Kewaunee	--	109	--	48	--	31	25	--	10	222	134	52	14	43	41	36	--
Manitowoc	--	132	--	45	20	27	404	5	--	632	200	51	--	246	195	24	11
Milwaukee	--	--	--	--	--	1	1	--	--	3	2	--	--	--	--	--	--
Outagamie	--	23	--	--	1	19	64	--	--	107	237	309	--	205	55	31	11
Ozaukee	--	1	1	--	--	3	5	--	--	10	13	--	--	32	--	--	--
Racine	--	--	--	--	--	--	--	--	--	--	13	--	--	--	--	--	--
Rock	--	1	--	--	2	251	19	5	--	279	31	--	--	6	--	--	--
Sheboygan	--	5	--	--	--	35	29	1	--	69	246	19	--	166	65	2	7
Walworth	--	--	--	--	2	2	2	--	--	6	14	--	--	--	--	--	--
Washington	--	--	--	--	--	5	2	2	--	9	43	27	--	23	1	--	--
Waukesha	--	2	--	--	1	239	106	45	--	392	31	3	--	47	--	--	--
Winnebago	--	--	--	--	--	71	--	--	--	71	34	5	--	2	14	2	2
Total	--	458	2	139	108	1,920	1,106	73	10	3,816	1,415	2,131	48	1,969	580	204	60
SOUTHWEST UNIT																	
Buffalo	--	--	--	--	9	291	38	10	--	348	105	1,624	--	539	--	39	5
Crawford	--	--	--	--	--	2	--	--	--	2	101	69	--	333	--	2	--
Dunn	--	--	3	--	253	2,301	655	8	2	3,223	286	2,560	--	672	--	56	9
Grant	--	--	--	--	1	19	16	--	--	35	99	23	--	275	--	1	--
Iowa	--	--	--	--	11	269	168	--	--	448	58	18	--	128	--	--	--
La Crosse	--	--	--	--	89	152	33	12	--	286	85	125	--	164	--	41	3
Lafayette	--	--	--	--	1	--	4	--	--	5	17	1	--	115	--	--	--
Pepin	--	--	3	--	6	106	12	1	--	128	27	363	--	127	--	16	--
Pierce	--	--	--	--	6	134	15	3	--	158	273	197	--	699	--	9	--
Richland	--	--	--	--	3	48	69	--	--	120	300	176	--	525	--	1	--
Sauk	9	--	1	1	71	1,263	292	21	--	1,658	198	292	--	421	--	9	2
St. Croix	12	--	2	--	19	656	285	10	--	983	25	2,469	--	150	--	10	--
Trempealeau	--	--	--	--	28	1,148	141	15	--	1,333	54	2,809	--	309	--	434	10
Vernon	--	--	--	--	--	250	222	--	--	472	280	201	--	666	--	4	--
Total	21	--	9	1	497	6,639	1,949	80	2	9,198	1,907	10,926	--	5,124	--	622	29
State total	21	1,351	7,170	7,671	36,677	93,576	33,021	5,381	592	185,459	17,647	328,105	570	37,527	2,746	34,769	5,373

(Table 21 continued on next page)

(Table 21 continued)

Unit and county	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Black cherry	Other hardwoods	Hack-berry	Butter-nut	Total hardwoods	All species
CENTRAL UNIT														
Adams	14	8	--	103	119	1,555	298	--	9	--	11	1	2,716	10,599
Chippewa	29	23	--	960	1,414	6,135	1,153	--	55	--	15	6	21,555	23,848
Clark	1	80	--	1,525	2,307	5,277	1,277	--	32	--	3	8	22,638	24,461
Eau Claire	--	25	--	224	303	1,573	371	--	10	--	2	1	4,904	7,076
Jackson	--	24	--	259	839	5,756	1,498	--	30	--	24	9	12,672	17,946
Juneau	--	51	--	309	412	3,929	944	2	23	--	33	5	7,458	11,011
Marathon	3	325	--	6,157	1,968	6,581	875	14	39	--	63	23	28,905	32,362
Marquette	5	5	--	102	106	2,129	349	--	2	--	11	1	2,937	4,948
Monroe	2	52	--	306	436	6,641	1,864	2	42	--	68	4	10,522	12,786
Portage	1	12	--	430	342	1,677	418	3	7	--	--	3	4,623	8,012
Waupaca	5	50	--	2,404	1,481	3,900	577	14	29	--	40	31	11,276	13,487
Waushara	10	5	--	258	140	1,882	717	--	1	--	18	2	3,518	8,176
Wood	5	16	--	224	612	2,740	509	--	3	--	2	3	7,286	9,535
Total	74	677	--	13,260	10,478	49,773	10,850	35	282	--	291	98	141,008	184,246
NORTHEAST UNIT														
Florence	2	31	--	4,273	1,026	836	42	--	53	--	--	3	19,429	22,189
Forest	4	349	--	11,328	2,957	2,759	224	--	164	--	3	15	40,641	46,270
Langlade	6	230	--	5,509	2,444	2,574	312	14	134	--	6	14	29,052	31,031
Lincoln	12	125	--	1,638	1,318	1,764	73	--	87	--	1	--	21,047	24,453
Marinette	11	15	--	4,258	2,853	6,121	416	--	69	--	18	4	44,145	52,711
Menominee	--	63	--	3,555	1,160	2,351	303	--	63	--	--	--	16,735	25,001
Oconto	1	23	--	1,690	2,048	3,065	435	--	32	--	1	1	21,740	28,890
Oneida	18	41	--	2,702	1,816	2,747	200	--	161	--	--	1	29,126	40,404
Shawano	19	97	--	3,927	1,310	3,157	339	28	44	--	142	38	16,056	17,829
Vilas	7	77	--	3,032	1,872	1,669	1,630	--	63	--	--	--	31,179	40,890
Total	80	1,050	--	41,913	18,804	27,042	3,974	42	871	--	171	76	269,150	329,668
NORTHWEST UNIT														
Ashland	1	46	--	2,648	1,565	2,167	211	--	34	--	1	2	17,441	22,063
Barron	1	21	--	315	343	3,789	794	1	12	--	13	27	13,602	15,596
Bayfield	1	18	--	1,022	855	2,701	159	--	21	--	--	6	27,637	50,069
Burnett	1	4	--	212	214	1,630	615	--	11	--	--	2	10,354	18,510
Douglas	--	1	--	87	360	496	9	--	2	--	--	--	12,029	22,683
Iron	5	100	--	2,036	1,303	1,075	129	--	90	--	1	2	19,464	22,556
Polk	1	5	--	284	170	3,121	372	--	5	--	--	3	9,283	10,320
Price	13	104	--	3,273	1,849	3,035	192	--	91	--	1	2	27,543	32,983
Rusk	4	50	--	1,897	1,524	5,885	721	--	95	--	56	13	27,563	28,716
Sawyer	5	144	--	2,513	1,990	5,835	538	--	49	--	7	5	35,310	38,913
Taylor	4	316	--	1,692	1,434	1,390	150	--	26	--	3	1	18,366	19,268
Washburn	--	31	--	511	811	2,601	94	--	9	--	13	3	20,913	26,517
Total	35	841	--	16,488	12,419	33,726	3,984	1	444	--	94	66	239,505	308,194

(Table 21 continued on next page)

(Table 21 continued)

Unit and county	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Black cherry	Other hardwoods	Hack-berry	Butter-nut	Total hardwoods	All species
SOUTHEAST UNIT														
Brown	74	9	--	373	295	462	260	--	1	--	9	--	2,585	2,812
Calumet	21	27	--	222	496	246	196	--	4	--	9	--	1,412	1,453
Columbia	1	16	--	47	12	853	498	68	10	--	2	--	1,975	2,882
Dane	5	20	--	35	28	2,141	1,423	139	89	1	44	--	4,468	4,527
Dodge	--	88	--	247	57	475	695	--	--	--	56	--	1,872	1,892
Door	27	9	--	212	27	117	51	--	--	--	--	5	995	1,199
Fond Du Lac	--	2	--	11	50	140	143	2	--	--	10	--	412	455
Green	--	53	--	100	47	601	331	74	20	--	1	--	1,450	1,526
Green Lake	2	--	--	14	8	207	40	--	--	2	2	--	313	481
Jefferson	--	38	--	158	32	612	497	41	33	--	26	--	1,669	1,938
Kenosha	--	4	--	--	--	31	31	--	6	--	--	--	78	80
Kewaunee	19	9	--	192	74	177	46	--	5	--	--	5	847	1,069
Manitowoc	42	24	--	560	462	527	268	--	--	--	10	--	2,619	3,251
Milwaukee	--	--	--	--	--	3	--	1	--	--	--	--	6	8
Outagamie	14	22	--	461	828	754	116	--	48	1	23	14	3,129	3,236
Ozaukee	--	--	--	53	138	50	31	--	--	--	3	--	319	329
Racine	--	13	--	--	--	117	117	--	26	--	--	--	286	286
Rock	2	37	--	13	4	356	344	23	51	--	4	3	875	1,154
Sheboygan	20	--	--	405	349	538	235	--	--	--	11	--	2,063	2,133
Walworth	2	13	--	8	--	217	251	9	42	--	5	--	559	565
Washington	--	4	--	172	214	280	272	--	27	--	17	--	1,079	1,088
Waukesha	--	13	--	5	1	177	156	3	25	--	1	--	461	853
Winnebago	--	--	--	59	17	119	14	--	--	--	--	--	269	339
Total	228	398	--	3,347	3,139	9,199	6,014	360	386	4	232	27	29,739	33,555
SOUTHWEST UNIT														
Buffalo	374	189	20	117	446	9,471	2,372	1	72	63	202	6	15,646	15,994
Crawford	--	311	--	829	98	6,322	1,902	105	41	62	54	--	10,229	10,230
Dunn	71	147	11	1,151	648	5,199	1,392	--	74	83	33	16	12,409	15,632
Grant	11	228	--	626	64	2,883	1,318	240	17	--	26	1	5,812	5,848
Iowa	--	165	6	118	8	2,513	1,597	243	31	72	30	--	4,986	5,434
La Crosse	16	204	17	264	146	6,023	1,594	68	40	53	89	1	8,933	9,219
Lafayette	--	7	--	21	4	134	215	48	7	--	--	--	570	575
Pepin	169	23	6	240	147	2,214	548	--	7	--	34	1	3,922	4,050
Pierce	233	129	15	338	113	1,383	1,191	--	5	45	28	7	4,664	4,822
Richland	--	329	14	1,162	251	5,086	1,609	59	44	72	144	3	9,774	9,894
Sauk	--	206	12	656	512	6,493	2,484	41	65	112	130	3	11,635	13,293
St. Croix	15	15	9	379	32	988	300	--	3	--	4	2	4,401	5,384
Trempealeau	175	22	--	114	376	7,047	2,124	1	119	79	86	5	13,763	15,095
Vernon	24	317	19	1,940	109	7,871	3,668	31	62	123	205	3	15,523	15,995
Total	1,087	2,293	129	7,955	2,954	63,627	22,314	837	588	766	1,065	46	122,268	131,466
State total	1,505	5,259	129	82,963	47,794	183,366	47,136	1,275	2,571	770	1,852	312	801,670	987,130

1/ International 1/4-inch rule.

Table 22.--Harvest residue generated by industrial roundwood harvesting by Forest Survey Unit, county, and species group, Wisconsin, 1992

(In thousand cubic feet)

Unit and county	Red-cedar	N. white-cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tama-rack	Total softwoods	Ash	Aspen	Balsam poplar	Bass-wood	Beech	White birch	Yellow birch
CENTRAL UNIT																	
Adams	--	--	--	--	897	482	87	1	--	1,466	15	75	--	9	--	18	1
Chippewa	--	--	1	1	20	145	32	3	--	203	110	1,602	1	141	--	154	6
Clark	--	--	--	--	76	85	51	--	1	213	126	1,585	--	106	--	221	20
Eau Claire	--	--	--	--	248	144	11	1	--	404	20	380	--	9	--	45	4
Jackson	--	--	--	--	762	170	86	2	1	1,021	26	637	--	22	--	74	4
Juneau	--	--	--	--	454	168	41	1	--	663	18	121	--	17	--	17	1
Marathon	--	--	5	22	54	128	127	20	--	356	224	1,312	1	313	3	117	74
Marquette	--	--	--	--	24	171	51	1	--	246	7	8	--	7	--	3	--
Monroe	--	--	--	--	188	123	47	2	--	359	24	94	--	21	--	18	1
Portage	--	--	--	8	118	202	90	2	1	422	18	239	1	28	--	25	3
Waupaca	--	4	1	11	16	178	47	2	--	260	63	271	--	65	8	9	9
Waushara	--	--	--	--	38	405	113	1	--	557	5	55	--	12	--	4	1
Wood	--	--	--	1	103	115	73	1	--	294	26	456	--	15	--	39	3
Total	--	4	8	44	2,998	2,517	854	37	4	6,465	680	6,836	3	765	11	742	126
NORTHEAST UNIT																	
Florence	--	--	64	85	18	86	15	61	--	329	44	1,523	24	118	20	520	69
Forest	--	9	144	55	23	262	35	107	9	643	195	2,127	23	313	16	899	141
Langlade	--	4	81	17	85	78	16	26	7	313	175	2,041	13	288	9	530	60
Lincoln	--	--	48	11	69	184	53	23	7	393	163	2,238	12	247	2	382	30
Marinette	--	30	102	29	538	463	33	50	12	1,256	109	3,602	20	168	68	666	39
Menominee	--	1	5	346	62	75	310	1	1	800	84	552	9	149	86	76	61
Oconto	--	6	13	2	151	535	27	2	--	736	53	1,831	19	36	32	349	15
Oneida	--	4	108	20	259	513	219	97	11	1,230	225	2,571	13	268	5	896	33
Shawano	--	27	1	24	7	81	32	5	1	178	96	736	7	100	54	62	25
Vilas	--	1	96	6	296	373	206	55	5	1,038	111	2,743	22	108	14	1,343	46
Total	--	82	660	595	1,507	2,650	944	428	51	6,916	1,255	19,964	162	1,795	305	5,722	517
NORTHWEST UNIT																	
Ashland	--	1	120	14	224	108	77	115	6	667	127	1,166	--	141	--	401	44
Barron	--	--	--	1	63	97	50	7	--	217	28	980	--	45	--	74	3
Bayfield	--	--	54	4	1,249	1,020	174	54	3	2,558	68	3,261	--	37	--	811	18
Burnett	--	--	2	--	788	336	42	--	--	1,168	10	1,119	--	17	--	65	2
Douglas	--	--	156	--	993	405	30	20	--	1,605	6	1,694	--	1	--	374	1
Iron	--	5	163	41	98	53	23	128	7	518	122	2,276	2	151	15	294	36
Polk	--	--	--	--	54	62	6	--	--	122	10	593	--	33	--	16	1
Price	--	1	112	20	47	262	67	80	16	604	201	2,273	5	342	1	587	60
Rusk	--	--	6	5	21	48	30	17	8	136	199	1,770	1	352	--	446	34
Sawyer	--	--	52	8	78	130	91	42	11	412	239	2,475	2	392	1	853	69
Taylor	--	--	53	17	6	9	22	15	3	126	123	1,695	2	252	4	232	35
Washburn	--	--	7	--	453	274	16	7	--	757	76	2,140	--	16	--	324	5
Total	--	8	726	111	4,075	2,804	627	485	54	8,890	1,209	21,443	12	1,778	22	4,478	308

(Table 22 continued on next page)

(Table 22 continued)

Unit and county	Red-cedar	N. white-cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Total softwoods	Ash	Aspen	Balsam poplar	Basswood	Beech	White birch	Yellow birch
SOUTHEAST UNIT																	
Brown	--	7	--	2	--	3	7	--	--	20	8	132	13	16	14	3	1
Calumet	--	2	--	--	--	--	1	--	--	4	6	1	--	12	3	--	--
Columbia	--	--	--	--	9	87	17	2	--	115	4	18	--	11	--	1	--
Dane	--	--	--	--	1	4	2	--	--	7	4	13	--	30	--	1	--
Dodge	--	--	--	--	1	1	1	--	--	2	11	1	--	17	--	--	--
Door	--	9	--	1	--	2	5	--	--	17	7	37	--	2	7	10	2
Fond Du Lac	--	--	--	--	--	5	--	--	--	5	6	--	--	1	--	--	--
Green	--	--	--	--	5	5	2	--	--	12	3	--	--	24	--	--	--
Green Lake	--	--	--	--	1	17	3	--	--	21	--	3	--	--	--	--	--
Jefferson	--	--	--	--	7	28	3	--	--	38	3	--	--	24	--	--	--
Kenosha	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
Kewaunee	--	11	--	3	--	2	2	--	1	20	16	6	2	5	5	4	--
Manitowoc	--	13	--	3	2	2	29	1	--	51	25	6	--	30	22	3	1
Milwaukee	--	--	--	--	--	--	--	--	--	0	--	--	--	--	--	--	--
Outagamie	--	2	--	--	--	2	5	--	--	10	31	59	--	25	6	9	2
Ozaukee	--	--	--	--	--	--	1	--	--	1	2	--	--	4	--	--	--
Racine	--	--	--	--	--	--	--	--	--	--	2	--	--	--	--	--	--
Rock	--	--	--	--	1	31	2	1	--	35	4	--	--	1	--	--	--
Sheboygan	--	--	--	--	--	4	2	--	--	7	30	2	--	20	7	--	1
Walworth	--	--	--	--	1	--	--	--	--	1	2	--	--	--	--	--	--
Washington	--	--	--	--	--	1	--	--	--	1	5	1	--	3	--	--	--
Waukesha	--	--	--	--	--	30	13	9	--	52	4	--	--	6	--	--	--
Winnebago	--	--	--	--	--	5	--	--	--	5	4	1	--	--	1	1	--
Total	--	46	--	10	28	231	96	13	1	426	175	282	14	231	64	32	8
SOUTHWEST UNIT																	
Buffalo	--	--	--	--	3	36	5	2	--	46	13	197	--	65	--	5	1
Crawford	--	--	--	--	--	--	--	--	--	--	12	8	--	40	--	--	--
Dunn	--	--	1	--	75	251	51	2	--	379	40	408	--	83	--	21	2
Grant	--	--	--	--	--	2	1	--	--	4	12	3	--	33	--	--	--
Iowa	--	--	--	--	3	34	15	--	--	52	7	2	--	15	--	--	--
La Crosse	--	--	--	--	26	18	4	2	--	50	11	15	--	20	--	7	1
Lafayette	--	--	--	--	--	--	--	--	--	1	2	--	--	14	--	--	--
Pepin	--	--	1	--	2	13	1	--	--	17	3	50	--	15	--	2	--
Pierce	--	--	--	--	2	10	1	--	--	14	33	27	--	84	--	1	--
Richland	--	--	--	--	1	5	6	--	--	12	36	21	--	63	--	--	--
Sauk	1	--	--	--	21	155	32	4	--	213	24	33	--	51	--	3	--
St. Croix	1	--	--	--	6	58	21	2	--	88	3	453	--	18	--	4	--
Trempealeau	--	--	--	--	8	143	17	3	--	171	8	220	--	38	--	24	1
Vernon	--	--	--	--	--	20	16	--	--	36	34	23	--	80	--	--	--
Total	2	--	2	--	147	746	170	16	--	1,083	239	1,460	--	618	--	69	5
State total	2	139	1,397	760	8,755	8,948	2,691	979	111	23,781	3,557	49,986	192	5,188	401	11,044	964

(Table 22 continued on next page)

(Table 22 continued)

Unit and county	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Hack-berry	Butter-nut	Black cherry	Other hardwoods	Total hardwoods	All species
CENTRAL UNIT														
Adams	2	1	--	25	19	209	36	--	1	--	3	--	413	1,879
Chippewa	4	9	--	190	217	678	121	--	2	1	19	--	3,253	3,456
Clark	--	25	--	286	366	560	143	--	--	1	9	--	3,449	3,662
Eau Claire	--	9	--	57	55	171	41	--	--	--	3	--	795	1,199
Jackson	--	5	--	64	146	597	160	--	3	1	5	--	1,746	2,767
Juneau	--	6	--	51	62	411	103	--	4	1	4	--	815	1,478
Marathon	1	97	--	671	294	677	94	1	8	3	10	--	3,898	4,254
Marquette	1	1	--	12	15	219	36	--	1	--	1	--	310	557
Monroe	--	7	--	36	59	674	191	--	10	1	6	--	1,139	1,499
Portage	1	3	--	68	54	171	44	--	--	--	2	--	656	1,078
Waupaca	1	8	--	244	198	396	60	1	5	4	4	--	1,343	1,603
Waushara	1	1	--	26	18	195	73	--	2	--	1	--	393	951
Wood	1	3	--	51	104	272	55	--	--	--	1	--	1,027	1,321
Total	10	175	--	1,781	1,606	5,228	1,156	3	37	12	68	--	19,239	25,704
NORTHEAST UNIT														
Florence	1	10	--	612	206	95	8	--	--	--	16	--	3,266	3,595
Forest	2	119	--	1,443	538	315	47	--	--	2	28	--	6,207	6,850
Langlade	2	84	--	857	431	309	49	1	1	2	25	--	4,879	5,192
Lincoln	5	48	--	344	229	279	15	--	--	--	32	--	4,024	4,417
Marinette	2	6	--	753	463	626	44	--	2	--	24	--	6,593	7,849
Menominee	--	24	--	475	234	179	26	--	--	--	14	--	1,967	2,767
Oconto	--	6	--	307	299	313	47	--	--	--	10	--	3,317	4,053
Oneida	6	13	--	634	348	453	38	--	--	--	58	--	5,560	6,790
Shawano	2	15	--	394	184	326	37	2	17	5	6	--	2,067	2,245
Vilas	2	29	--	547	338	209	178	--	--	--	19	--	5,707	6,745
Total	21	353	--	6,364	3,270	3,104	488	3	21	9	232	--	43,585	50,502
NORTHWEST UNIT														
Ashland	--	16	--	469	283	266	44	--	--	--	9	--	2,969	3,635
Barron	--	3	--	55	57	390	82	--	2	3	4	--	1,726	1,944
Bayfield	--	7	--	219	145	293	26	--	--	1	8	--	4,893	7,452
Burnett	--	1	--	39	40	165	63	--	--	--	4	--	1,525	2,693
Douglas	--	--	--	33	50	53	2	--	--	--	1	--	2,216	3,821
Iron	2	38	--	519	279	181	26	--	--	--	28	--	3,969	4,488
Polk	--	1	--	54	25	309	38	--	--	--	1	--	1,081	1,203
Price	5	38	--	512	317	384	30	--	--	--	31	--	4,786	5,391
Rusk	1	19	--	481	305	697	91	--	7	2	34	--	4,438	4,575
Sawyer	2	51	--	560	384	642	70	--	1	1	17	--	5,758	6,170
Taylor	2	117	--	307	250	173	21	--	--	--	9	--	3,222	3,348
Washburn	--	11	--	111	147	266	12	--	2	--	3	--	3,114	3,871
Total	13	303	--	3,360	2,284	3,817	504	--	11	8	149	--	39,699	48,589

(Table 22 continued on next page)

(Table 22 continued)

Unit and county	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Walnut	Hack-berry	Butter-nut	Black cherry	Other hardwoods	Total hardwoods	All species
SOUTHEAST UNIT														
Brown	9	1	--	34	36	46	27	--	1	--	--	--	339	359
Calumet	2	3	--	20	60	25	20	--	1	--	--	--	154	158
Columbia	--	2	--	5	2	85	46	8	--	--	1	--	184	299
Dane	1	2	--	4	4	209	146	16	5	--	11	--	447	455
Dodge	--	11	--	22	7	48	67	--	7	--	--	--	191	193
Door	2	1	--	19	3	12	5	--	--	1	--	--	110	127
Fond Du Lac	--	--	--	1	6	13	15	--	1	--	--	--	44	49
Green	--	6	--	9	6	62	34	8	--	--	2	--	155	167
Green Lake	--	--	--	2	1	20	4	--	--	--	--	--	31	52
Jefferson	--	5	--	14	4	63	51	5	3	--	4	--	175	212
Kenosha	--	--	--	--	--	3	3	--	--	--	1	--	8	9
Kewaunee	2	1	--	17	9	18	5	--	--	1	1	--	90	110
Manitowoc	5	3	--	51	56	52	27	--	1	--	--	--	282	333
Milwaukee	--	--	--	--	--	--	--	--	--	--	--	--	1	1
Outagamie	2	3	--	49	103	78	12	--	3	2	6	--	390	400
Ozaukee	--	--	--	5	17	5	3	--	--	--	--	--	35	37
Racine	--	2	--	--	--	12	12	--	--	--	3	--	30	30
Rock	--	4	--	1	--	36	35	3	--	--	6	--	92	128
Sheboygan	2	--	--	35	41	52	24	--	1	--	--	--	216	223
Walworth	--	2	--	1	--	22	26	1	1	--	5	--	59	60
Washington	--	--	--	15	26	29	28	--	2	--	3	--	113	114
Waukesha	--	2	--	--	--	18	16	--	--	--	3	--	49	102
Winnebago	--	--	--	6	2	11	2	--	--	--	--	--	29	34
Total	26	48	--	311	383	920	607	42	28	3	47	1	3,222	3,648
SOUTHWEST UNIT														
Buffalo	39	23	2	12	52	967	241	--	24	1	9	8	1,658	1,704
Crawford	--	37	--	74	12	641	181	11	7	--	5	8	1,036	1,036
Dunn	9	18	1	119	82	529	137	--	4	2	11	10	1,476	1,854
Grant	1	27	--	56	8	294	128	28	3	--	2	--	595	599
Iowa	--	20	1	11	1	257	158	28	4	--	4	9	515	567
La Crosse	2	25	2	26	19	575	159	8	11	--	5	6	892	942
Lafayette	--	1	--	2	--	14	20	5	--	--	1	--	59	59
Pepin	17	3	1	21	18	226	56	--	4	--	1	--	417	434
Pierce	22	16	2	30	12	139	122	--	3	1	1	5	497	511
Richland	--	40	2	104	30	519	154	6	17	--	5	9	1,007	1,018
Sauk	--	25	1	63	63	663	239	5	16	--	8	13	1,207	1,421
St. Croix	2	2	1	33	4	100	31	--	--	--	--	--	652	740
Trempealeau	21	3	--	14	38	721	213	--	10	1	15	10	1,336	1,507
Vernon	3	38	2	173	13	802	347	3	25	--	7	15	1,567	1,603
Total	115	277	16	738	351	6,447	2,186	93	128	6	73	92	12,912	13,995
State total	185	1,156	16	12,555	7,894	19,516	4,940	141	225	38	569	93	118,657	142,439

Table 23.--Residue produced at primary wood-using mills by type of material, type of use, and Forest Survey Unit, Wisconsin, 1992

(In thousand tons, green weight)

Survey Unit and type of use	Wood residue						Bark	
	Total		Coarse 1/		Fine 2/			
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
CENTRAL UNIT								
Fiber products	7.38	80.11	7.27	67.69	0.12	12.42	--	1.62
Charcoal	--	2.38	--	--	--	2.38	--	--
Industrial fuel-mill	0.32	17.93	0.32	9.13	--	8.80	128.49	142.03
Industrial fuel-sold	2.23	38.98	1.13	10.76	1.10	28.22	32.03	90.14
Domestic fuel	1.75	41.35	1.74	40.92	--	0.42	0.61	5.58
Miscellaneous 3/	6.23	39.07	0.62	6.08	5.60	32.99	34.53	75.88
Not used	0.37	1.57	0.34	1.42	0.03	0.14	5.05	12.73
Total	18.27	221.38	11.41	136.00	6.86	85.37	200.72	327.98
NORTHEAST UNIT								
Fiber products	35.44	165.11	32.55	140.20	2.88	24.91	0.02	1.24
Industrial fuel-mill	17.71	61.72	6.93	34.14	10.78	27.58	13.50	145.72
Industrial fuel-sold	1.98	101.41	1.10	68.77	0.89	32.64	1.65	80.40
Domestic fuel	2.77	22.09	2.77	21.66	--	0.43	0.61	3.73
Miscellaneous 3/	2.09	68.73	0.57	16.61	1.52	52.12	2.89	21.74
Not used	1.11	1.69	0.34	0.98	0.77	0.71	0.42	0.67
Total	61.11	420.74	44.26	282.35	16.85	138.39	19.10	253.49
NORTHWEST UNIT								
Fiber products	4.30	63.48	4.19	61.28	0.10	2.20	0.51	1.40
Charcoal	0.11	9.00	0.09	7.90	0.03	1.10	--	0.70
Industrial fuel-mill	0.92	30.26	0.01	16.12	0.91	14.15	1.78	105.62
Industrial fuel-sold	3.36	36.05	1.52	13.14	1.84	22.91	1.42	101.90
Domestic fuel	1.62	11.45	1.62	11.30	0.01	0.15	0.57	3.33
Miscellaneous 3/	2.49	58.87	0.64	34.23	1.85	24.65	0.22	6.06
Not used	4.86	3.16	3.67	0.60	1.19	2.56	1.65	1.65
Total	17.66	212.29	11.73	144.57	5.93	67.71	6.16	220.68
SOUTHEAST UNIT								
Fiber products	28.00	12.99	27.07	12.36	0.93	0.62	--	--
Industrial fuel-mill	8.70	3.33	0.29	2.10	8.41	1.23	71.93	48.22
Industrial fuel-sold	0.13	1.23	0.13	1.23	--	--	--	--
Domestic fuel	1.27	7.31	1.27	7.28	0.01	0.03	0.28	3.00
Miscellaneous 3/	7.90	55.52	4.56	28.39	3.34	27.13	2.26	17.93
Not used	0.31	0.49	0.22	0.24	0.09	0.26	0.12	0.27
Total	46.31	80.88	33.53	51.61	12.78	29.27	74.60	69.42
SOUTHWEST UNIT								
Fiber products	2.84	69.39	2.84	65.36	--	4.03	--	1.29
Charcoal	--	1.54	--	1.54	--	--	--	0.66
Industrial fuel-mill	0.01	20.02	--	9.15	0.01	10.87	0.01	6.55
Industrial fuel-sold	0.59	27.74	0.17	13.02	0.42	14.72	2.10	4.58
Domestic fuel	1.54	42.71	1.54	42.70	--	0.01	0.18	7.37
Miscellaneous 3/	3.09	83.87	0.28	26.87	2.81	57.01	0.42	49.92
Not used	0.85	8.90	0.68	7.04	0.17	1.86	0.12	1.64
Total	8.92	254.18	5.52	165.68	3.40	88.50	2.82	72.00
STATE TOTAL								
Fiber products	77.96	391.07	73.93	346.88	4.04	44.19	0.54	5.55
Charcoal	0.11	12.92	0.09	9.44	0.03	3.47	--	1.36
Industrial fuel-mill	27.65	133.26	7.55	70.64	20.11	62.62	215.72	448.13
Industrial fuel-sold	8.29	205.40	4.05	106.91	4.25	98.49	37.20	277.02
Domestic fuel	8.96	124.91	8.93	123.87	0.02	1.04	2.26	23.02
Miscellaneous 3/	21.79	306.07	6.67	112.18	15.12	193.89	40.33	171.53
Not used	7.50	15.82	5.25	10.29	2.25	5.53	7.37	16.96
Total	152.27	1,189.46	106.46	780.22	45.82	409.24	303.41	943.56

1/ Suitable for chipping such as slabs, edgings, veneer cores, etc.

2/ Not suitable for chipping such as sawdust, veneer clippings, etc.

3/ Livestock bedding, mulch, small dimension, and specialty.

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Hackett, Ronald L.; Whipple, James W.
1995. **Wisconsin timber industry—an assessment of timber product output and use.** Resour. Bull. NC-164. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 64 p.

Discusses recent Wisconsin forest industry trends; production and receipts of pulpwood, saw logs, and veneer logs; and production of other timber products in 1992. Reports on logging residue, on wood and bark residue generated at primary wood-using mills, and on disposition of this mill residue.

KEY WORDS: Pulpwood, saw logs, veneer logs, residue

Our job at the North Central Forest Experiment Station is discovering and creating new knowledge and technology in the field of natural resources and conveying this information to the people who can use it. As a new generation of forests emerges in our region, managers are confronted with two unique challenges: (1) Dealing with the great diversity in composition, quality, and ownership of the forests, and (2) Reconciling the conflicting demands of the people who use them. Helping the forest manager meet these challenges while protecting the environment is what research at North Central is all about.